

'Following the Line': An ethnographic study of the influence of
routine baby weighing on breastfeeding women
in a town in the Northwest of England

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A thesis presented in fulfilment of the requirements for the
degree of Doctor of Philosophy

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November 2005

'FOLLOWING THE LINE': AN ETHNOGRAPHIC STUDY OF THE INFLUENCE OF ROUTINE BABY WEIGHING ON BREASTFEEDING WOMEN IN A TOWN IN THE NORTHWEST OF ENGLAND

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Abstract

Weight monitoring is an integral part of routine community child health care in the United Kingdom. An intensive focus on fluctuations in charted weight of young babies has been charged by some breastfeeding advocates with undermining continued breastfeeding. Concern has also been expressed by clinicians and women about the applicability of current growth charts to breastfed babies – a concern echoed by the World Health Organisation.

This ethnographic study involved two phases. Six months' participant observation in a child health clinic in the Northwest of England was followed by longitudinal interviews with 14 breastfeeding women. Equal numbers of first and second-time mothers were included; they were interviewed two to three times in the first six months. Data were analysed using grounded theory, allowing an in-depth examination of the lived experiences of weighing and how these shaped on-going feeding decisions and the course of breastfeeding.

Weighing babies was the major focus of clinic visits for women and for health visitors. Interactions centred on the concern that the baby's weight should 'follow the line' of the centiles on the chart. Mothers and health visitors also collaborated in efforts to achieve prescriptive routines of baby feeding and sleeping. Breastfeeding was treated as a milk production system, and required to measure up. If weight gain caused concern a variety of strategies were used, including formula supplements and 'worrying'. Techniques to improve the physical effectiveness of breastfeeding were not part of the routine approach to any feeding difficulty on the part of either mothers or health visitors.

Using anthropological theory, the character of weighing as a ritual occasion is explored. Weighing sessions are shown to provide occasions to mark the rite of passage through the liminal time of early motherhood. Building on the observation of this ritual experience, it is suggested that the experience of breastfeeding is 'even more liminal', as our society treats formula feeding routines and growth as the implied norm for infants. Weight gain which conforms to chart centiles has become the measure and arbiter of breastfeeding adequacy. Minor fluctuations in weight were treated as potentially serious threats to infant health, while the maintenance of breastfeeding was considered secondary.

Recommendations are offered for improving the practical conduct of routine weight monitoring to improve its ability to identify growth which should genuinely spark concern. At the same time, the need for rituals to ease women through their early months of motherhood and the experience of breastfeeding is highlighted. Currently breastfeeding as a method of feeding milk to babies is poorly supported with suggestions for improving physical effectiveness, while at the same time, breastfeeding as a social practice is pushed to the margins of normal everyday experience. This lived dilemma for women and the health visitors who support them deserves attention at national policy level and serious consideration in overall planning of services.

ACKNOWLEDGEMENTS

This project has occupied a large part of more than six years of my life. Inevitably, I have depended on a number of people for support and inspiration.

Many researchers and writers have gone before me. In particular, Gay Palmer's 'The Politics of Breastfeeding' provided me with a way of viewing something of enormous personal importance in a global, historical way, when I first read it in 1989. I also remember, when I finished reading Penny Van Esterik's 'Motherpower and Infant Feeding', feeling electrified by her statement:

"The trajectory goal becomes not to have every woman breastfeed her infant, but to create conditions in individuals, households, communities, and nations so that every woman could" (Van Esterik, 1989, p211).

When I first considered doing a research degree, I was told to take care in choosing a supervisor. I approached Fiona Dykes and have never regretted my choice; indeed I consider myself to have made a most astute decision. Having chosen one good supervisor explicitly, I was then very lucky in the allocation of other members of my supervisory team. Ros Bramwell got me started and after her move from UCLAN, I was fortunate to have Bernie Carter agree to take me on. Aside from all the help and support with the research and writing the thesis, I cannot imagine having negotiated university paperwork without her! Martin Johnson has provided a reassuring safety net as the third member of my team.

My colleagues in The Breastfeeding Network have, over the years, allowed me to sound out my ideas (possibly ad nauseum) and discuss practical aspects of breastfeeding with them. I am particularly indebted to Phyll Buchanan, Jane Britten and Veronika Tudhope. I received a special sort of support from Wendy Jones (a BfN colleague) and Mary Smale, both of whom understood about being both a volunteer supporter and doing a PhD.

I could not have conducted this research without the women in the clinic – mothers and health visitors – who agreed to be interviewed. Their generosity in allowing me to share in their breastfeeding and working experiences was fundamental to the project. I have taken great care to represent their views as honestly as I can.

During more than a decade of training, working and training others as a volunteer breastfeeding supporter, I have been in the exceptional position of speaking to thousands of women about their experiences of breastfeeding. They gave me the chance to hear a huge range of different voices telling me how breastfeeding was for them. This provided an underpinning understanding for the entire PhD.

I am deeply grateful to my family. My father, Ray, gave financial help, which made it possible to study. My sister, Eliza, supported me from across the Atlantic. My husband, Michael, and son, Olaf, provided essential computer support, while Michael talked me through the statistical aspects of the construction of growth charts. Michael, Olaf and my daughter, Iona, have all lived alongside my absorption in my research and my obsession with breastfeeding issues. At times their comments have been incredibly useful and their tolerance has always been appreciated.

Finally, this thesis would not have been started without my own breastfeeding experiences. To my mother, Sally, who nurtured me; to Michael who always thought it was incredibly important that his children were breastfed and supported me; to Olaf and Iona who journeyed with me through the liminal time, sharing the ups and downs of intense embodied mutuality: thank you.

Magda Sachs

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LIST OF ABBREVIATIONS

AAP	American Academy of Pediatrics
ABM	The Association of Breastfeeding Mothers (UK volunteer breastfeeding support group)
BfN	The Breastfeeding Network (UK volunteer breastfeeding support group)
CGF	Child Growth Foundation
DH	Department of Health
FSID	Foundation for the Study of Infant Death
HV	health visitor
LLLGB	La Leche League of Great Britain (UK volunteer breastfeeding support group)
LLLI	La Leche League International
LREC	Local Research Ethics Committee
NCT	The National Childbirth Trust (UK volunteer breastfeeding support group)
PCHR	Parent-held Child Health Record
RCPCH	Royal College of Paediatrics and Child Health
UK90	Therowth chart currently in use in the UK
UNICEF	United Nations Children's Fund
UNICEF UK BFI	UNICEF United Kingdom Baby Friendly Initiative
WHO	World Health Organisation

Chapter 1: INTRODUCTION

“[T]he use of growth charts do little to promote duration or frequency of breastfeeding and may even play a role in the factors which deter women from choosing to breastfeed for longer durations or with greater frequency. We found that mothers’ personal interpretations of the charts were representative of the larger socio-cultural and economic issues that affected their lives on a daily basis” (Behague, 1993, p1565).

Why this Study?

I began this study with 11 years’ experience as a volunteer breastfeeding supporter. In this role, I supported women who contacted me in making choices about feeding their babies and gave information and support for continued breastfeeding. In years of listening to women talk about their feelings, I developed a strong understanding that, while breastfeeding is praised as the ‘best’ way to feed a baby, our society has an impoverished understanding both of how breastfeeding works and of the strong feelings – both positive and negative – it can evoke.

In my work as a breastfeeding supporter, I noticed that when weight gain (usually poor weight gain) was the issue women were concerned about, this presented a particular challenge. The recorded weight gain pattern and efforts to ‘improve’ this would be the focus, while the physical management of breastfeeding or the quality of the experience would be relegated to less important status. I was taught to consider all of these facets of the mother-baby breastfeeding interaction and that addressing one area might impact on others. The experience of colleagues confirmed my sense that the urgency of poor weight, which raised fears of ‘danger’ to the baby, would make it harder for mothers to consider alterations in the physical aspects and frequency of breastfeeding as adequate interventions (Smale, 1996). Breastfeeding is a bio-psychosocial activity involving a complex domain of behaviours; the daily, or hourly, practices of women are shaped by both physiology and culture. Where weight is of concern, this external measure of infant health may collide with commitment to the ‘Womanly Art’ of breastfeeding, providing a crucible in which breastfeeding is harshly scrutinised for its adequacy as a means of nourishing babies.

At the time I took up this study, an international literature critiquing the validity of current growth charts for monitoring breastfed infants had already begun to appear and the World Health Organisation (WHO) was part-way through a decade-long project to produce a new chart. In the UK, this left practitioners unsure of how to interpret weights of breastfed babies, when they were plotted on the UK90 growth chart and when apparent ‘dips’ represented a

threat to infant health which warranted intervention. Practitioners and women felt some tension between the goal of continued breastfeeding and the need for 'adequate' infant growth.

Infant feeding has been the subject of comment for centuries (Beekman, 1977; Fildes, 1986; Dicks, 1987; Palmer, 1993; Hardyment, 1995) with women given advice that reflects the desirable cultural norms of their time. In the 20th century there has been an ever closer scrutiny of lactation physiology, breast milk composition and the epidemiology of infant populations. In recent decades a qualitative literature of women's experiences has blossomed, providing insights into the lives behind the statistics. Importantly, this work has often demonstrated the variety of individual experience, even within a single cultural setting, and has enriched understanding of factors which impact on patterns of initiation and duration noted in surveys.

Most qualitative studies seek to create a 'full length' portrait and investigate a range of the aspects of women's experience. A preponderance of research is concentrated in the early days or weeks, when women are most easily accessed via maternity care. I wanted to explore the lived experience of breastfeeding beyond the early days and the practice of routine weighing offered both a point of access – the clinic – and a relatively uninvestigated field of enquiry. Behague's (1993) Brazilian study, whose conclusions are quoted at the start of this chapter, provided a complex and inspiring investigation of this area, albeit in a different cultural setting, and offered clues to the potential richness of findings.

The expectation that this would be an area of interest has been borne out throughout my experience of conducting the study. Consistently, people with whom I have shared the title of my study have remarked on how it resonated for them personally and/or professionally. At a number of stages – choosing my methodology, examining the literature, observing in the clinic and speaking to women – I have been conscious of avenues not explored, ways of seeking information not attempted, indicating that this area is in no sense exhausted by this one study. In presenting my findings, I hope to point where further exploration might be of interest – both for those who seek to improve the uptake and experience of breastfeeding in the UK and for those who believe the understanding of how we shape our conduct of the basic human practice of feeding our young illuminates our culture.

Introduction to the Chapters

During the whole time I conducted the study, I have engaged with a range of literature. From an initial exploration, in which I expected to discover a discrete canon of work which would map the practice of weight monitoring in the UK and the physical understanding of infant

growth on which it rested, a multiplicity of potential areas unfolded. In chapter 2, I present a discussion of weight monitoring in the UK; a wider analysis was undertaken as part of the study (Sachs et al., 2005, 2006¹). I include an historical perspective on the practice of weighing in the UK and its enmeshment with the development and practices of the profession of health visiting. I also note the state of research on interventions in the management of breastfeeding and the use of supplements which might impact on baby weight gain.

Chapter 3 provides the methodological background to the study. In choosing to conduct an ethnographic study, including participant observation of women and health visitors, I entered into a particular tradition of the exploration of social phenomena. The majority of qualitative studies of breastfeeding have relied on interviews, with some use of focus groups. The use of observation, in addition to interviews, offers a different type of evidence – that which is seen and experienced as well as what is understood in interacting verbally with study participants. My use of grounded theory to analyse the data has ensured that the themes I discuss have arisen from the words and actions of the participants in the study.

In chapter 4 I detail how I conducted the study. I describe how I negotiated access with the clinic and recruitment and attended to ethical issues such as consent. I describe data collection and the use of grounded theory to analyse this. I also offer a reflexive account of how my individual point of view as the observer may have shaped the study.

In chapter 5 I present an ethnographic description of the study scene. This provides a word picture and documents the experience of those engaged in this particular situation. While this study was conducted in one place at one time, this account also seeks to illuminate the weighing interaction more generally. I also describe the setting of the longitudinal interviews I conducted with 14 breastfeeding women in the same geographical area. I seek to acknowledge the individuality of these women and the particularity of their experience, while suggesting that they represent some of the range of the breastfeeding experience of UK women.

In chapter 6 I present a typology of the reasons women in the study gave for bringing their babies to be weighed. This is the first such listing of a range of reasons gathered from women themselves. This suggests that there are a variety of needs women expect weight monitoring to fulfil. In chapter 7, I examine the relationship between health visitors and mothers, suggesting that this is aimed at ensuring babies are socialised into culturally desirable forms of behaviour, with breastfeeding somewhat pushed to the margin of focus. I closely examine how the

¹ See appendix 4.

weights plotted on the chart were discussed and understood in chapter 8. Chapter 9 examines in detail the ways women and health visitors suggested changing feeding and changes actually made, when baby weights were of concern. Together these chapters create a picture of women anxious to do what was expected of them in providing adequate feeding for their babies, with an overall sense that they should follow a prescribed line of conduct. I note how the expectation of a particular pattern of baby weight gain is entwined with notions of the desired outcome of the “project” of early mothering (Bowes & Domokos, 1998, p1).

In chapters 10 and 11 I use anthropological theory to examine weighing interactions as rituals and suggest what emotional outcome was sought through regular weighing. I also suggest that understanding the current breastfeeding experience of women as liminal, or engaged in a transitional stage, is heightened by a cultural understanding that the actual practice of breastfeeding, although laudable in principle, is actually socially marginalised. I use data from my study as well as from a number of other qualitative researchers to establish this theoretical understanding.

Weight monitoring produces a record through a series of measurements. Interpretation is coloured by the imperfections of the charts on which weights are recorded. These are accepted as straight-forward rather than as constructed tools, shaped by the assumptions made in collecting and analysing the data. Weighing babies is valued highly in our culture and has deep resonance for women. The relationship between the two people involved is valued as subservient to the external marker of adequate milk transfer in a mechanically-conceived model of infant feeding. In the final chapter I offer a further exploration of the UK understanding of breastfeeding as primarily a way of “putting milk into babies” (Churchill, 1943) and suggest changes in the conduct of weight monitoring which may increase its capacity to support breastfeeding.

This study represents an in-depth examination of how breastfeeding women and health visitors experience the practice of routine weight monitoring in the UK and offers a contribution to understanding of this issue and the wider issues of the lived experience of breastfeeding as a bio-psychosocial practice.

Chapter 2: BREASTFEEDING AND WEIGHT MONITORING ISSUES

“Some special points in Breast Feeding: The weight chart is of special importance, as a mother cannot tell accurately [...] how much food baby is taking. Twice a week up to two months and once afterwards, and on the same day of the week, and at the same times of day, she should weigh and chart his progress. A slight difference in gain can be ignored, but should not be continuous” (Langton Hewer, 1936, p32, emphasis in original).

In undertaking this study, I sought out the literature available to those who conduct routine weighing, principally health visitors², in order to understand the practice from the point of view of practitioners. This drew me quickly into a number of issues and controversies. I had begun with the assumption that there would be a standard introduction to clinical practice. It became clear that this is lacking; this was confirmed by two health visitor lecturers (Chadwick, 2004; Whittaker, 2004, personal communications). This intriguing lack, and the range of issues, led me to delve ever further.

In presenting the results of my search, I begin with an overview of breastfeeding duration statistics in the UK. I then draw together previous quantitative and qualitative studies which supply evidence that baby weight gain influences breastfeeding women. In examining these studies it has become clear that a number of related issues are tangled together and I attempt to pull these strands apart. I offer a brief consideration of the history of weight monitoring in the UK, indicating its relation to the development of the professions of paediatrics and health visiting and the introduction of mass artificial infant feeding.

I note the issues of accuracy of weighing practice and the international and UK controversies about the weight charts in use and the relevance this may have for understanding of breastfeeding efficacy by women and health visitors. I examine some of the literature on the relationship of breastfeeding ‘style’ to babies’ growth and attempt to unpack ‘insufficient milk’ – perceived or real – which has been a consistent reason given internationally, for decades, for early supplementation and cessation of breastfeeding. I also discuss the evidence for interventions where baby weight is of concern. A further exploration of some of these areas is presented in Sachs et al. (2005, 2006).

² Through the course of the study I have been informed of places in the UK in which nursery nurses, volunteers, receptionists, and mothers themselves weigh babies. In these cases, health visitors are available to discuss any issues arising from the recorded weight with the mother. Sharpe & Lowenthal (1992) comment on how volunteers who weigh can act as gatekeepers to health visitors; the impact of who weighs the baby deserves further investigation.

Finally, I touch briefly on the qualitative literature on women's breastfeeding experience. Only one study focuses closely on how weighing babies impacts on women's breastfeeding decisions (Behague, 1993). Women's views on many of the issues noted in my discussion of the literature on growth and weighing issues are therefore relatively unexplored.

Terminology and Limits of the Literature Considered

Weight monitoring terminology can sometimes be confusing. I understand 'growth monitoring' to refer to the regular collection of infant weight, length/height and head circumference or other anthropometric measurements and use the term 'weight monitoring' to refer to regular weighing alone. Panpanich and Garner (1999) note that growth monitoring should include not merely the serial collection and charting of measurements, but that where growth is of concern, interventions should be agreed by health workers in concert with mothers and outcomes tracked. In the UK, emphasis has been placed mainly on collection and charting by Hall and Elliman (2003) in their authoritative recommendations for community health workers and the issues of intervention and tracking have received less attention.

The initial neonatal weight loss and birth weight regain of breastfed babies I identify as a separate issue³. Ideally neonatal weight loss of concern would be identified during midwifery care and babies not discharged to routine community care⁴. Although prolonged early weight loss or delayed weight regain may impact on breastfeeding, I do not further examine this⁵; a discussion can be found in Sachs and Oddie (2002).

Breastfeeding – a UK Snapshot

Since 1975 the UK has published five-yearly surveys of infant feeding. In 2000, 69% of new mothers in the UK ever breastfed, while 28% of all babies received any breast milk at the age of four months (Hamlyn et al., 2002). By way of contrast, in 1946, 78% of babies were breastfed at 14 days (Douglas, 1950). Rates dropped in the third quarter of the 20th century – in 1975 initiation was 51%, with a rapid partial recovery (67% in 1980) which has since remained static (Scowen, 1989; Hamlyn et al., 2002). The decline, recovery and subsequent stasis of

³ Obviously it is not completely separate.

⁴ By this I mean that the professionals who identified the weight loss of concern would continue to monitor until birth weight was regained and feeding well established, at which point the mother and baby could resume routine care. Of course, the experience of a concern over early large weight loss and / or failure to regain could well colour subsequent experiences and I acknowledge that separating this issue off is somewhat artificial. Two women in this study had experience of their baby losing a great deal of weight in the early days.

⁵ Birth weight loss and regain will usually be monitored during midwifery care; I examined routine weight monitoring conducted by health visitors. The babies in this study had all regained their birthweight before I interviewed their mothers.

initiation and duration rates have been the focus of research and concern (Spence, 1938; Douglas, 1950; Newson & Newson, 1962; Hamlyn et al., 2002). The current policy recommendation is for all babies to be breastfed exclusively for six months, acknowledging “proven health benefits to breastfeeding for both child and mother in the short and long term” (Department of Health [DH] 2003b, p1) and following WHO (2002a) recommendations. In a recent cohort study, fewer than one percent of babies achieved this, indicating the magnitude of the shortfall of practice from recommendation (Kelly & Watt, 2005). Foster et al., (1997) noted a marked increase between 1990 and 1995 in the proportion of breastfeeding mothers giving formula supplements by four months. Varying types of government investment in breastfeeding have been made, from researching health service approaches which improve figures (DH, 2003a; Renfrew et al., 2005), setting initiation increase targets (DH, 2002) and yearly promotional campaigns during ‘National Breastfeeding Awareness week’ (DH, 2005a).

There are different types of impact weight monitoring might have on women’s decisions to continue, or initiate breastfeeding. One objective of monitoring is to ensure that no organic disease is present. Few disorders present with no symptoms other than unusual growth and height is more indicative than weight (Hall, 2000a; Hall & Elliman, 2003). Weight may be useful in conjunction with other symptoms (Wright, 2000). If an organic or hormonal disorder is identified, a specialist feeding regime may be prescribed; this is not further considered as the focus of this thesis is routine weighing of babies in well baby care. Secondly, weight gain of concern may prompt breastfeeding supplementation or cessation. Thirdly, where poor or unusual weight gain is identified, investigated and interventions with breastfeeding⁶ are undertaken; concern may remain on-going. A fourth possible influence would be that a focus on the measurement of weight gain shapes the understanding and experience of breastfeeding. These latter three effects might be experienced together and cross-influence one another. I present the evidence for these effects, as discovered in the literature.

Breastfeeding Cessation

In the national survey, 41% of women who stopped breastfeeding in the second week (at the time of handover to the health visitor) gave “insufficient milk” as the reason (Hamlyn et al., 2002, p110); this is the most frequently cited reason for stopping during the following months. In coding, this category combined several issues, including “baby not putting on enough weight” (Hamlyn, personal communication, 2004)⁷. In a local survey, questionnaires were sent to a cohort of 576 UK women, 47% of whom breastfed, and of these, 23% discontinued by 28

⁶ Interventions could include supplementation, blurring the boundaries with the previous type of influence.

⁷ I discuss further whether the perception of insufficient milk rests on physiological reality later in this chapter.

days: 50% due to worries about the volume of milk the baby was taking or the baby's weight gain. Weight comparisons of some infants with matched controls showed "no real evidence" of inadequate gain (Wylie & Verber, 1994). While underlining the effects of weight concerns, this study raises issues of the validity of fears. In an Australian study, a quarter of women who perceived themselves as having insufficient milk had stopped breastfeeding by six weeks (Binns & Scott, 2002). A small study of low income women discovered those who had not breastfed at all were influenced by their desire for "fat bonnie babies" (Shaw et al., 2003, p303), suggesting that concerns about weight might discourage breastfeeding initiation⁸: nationally, five percent of women who decide to bottlefeed cite the fact that they can "see how much the baby has had" (Hamlyn et al., 2002, p93) which may relate to the need for security about infant growth.

Intervention and On-Going Concern with weight

One third of breastfeeding women in the UK reported problems in the early weeks, about eight percent of these indicated that the baby was not gaining weight⁹ (Hamlyn, personal communication, 2004). By comparison, two percent of formula-fed babies with problems were reported to have poor weight gain¹⁰. At four to five months six percent of breastfed and five percent of formula-fed babies were described as "not gaining weight" (Hamlyn et al., 2002, p129). It appears that weight gain is identified as problematic for a minority of babies at any one time; the difficulties may be felt to be greater for breastfed babies in the early days; but concern is not confined to breastfeeding women¹¹. The survey collects information on the age of introduction, but not reasons for introducing formula milk or solids to breastfed babies. How prior breastfeeding difficulties were solved was not asked about in subsequent questionnaires¹².

A randomised controlled trial examining the offer of volunteer breastfeeding support on breastfeeding rates in London showed no effect, but collected the concerns of women who had intended to breastfeed at six weeks postpartum (Graffy et al., 2004a). Thirty-eight percent were at least a bit worried that their baby had not gained enough weight¹³ (Graffy et al., 2004b).

⁸ A US survey study found that a major reason for not breastfeeding was "uncertainty regarding the quantity of breast milk" (Arora et al., 2000, p1). I have focussed, in this section, on results for the UK, however no similar survey conducted in the UK has been discovered.

⁹ In Hamlyn et al. (2002) an amalgamated code is given.

¹⁰ Interestingly, about two in ten formula feeding mothers changed their brand of formula by 4-10 weeks because the "baby was still hungry or not satisfied" (Hamlyn et al., 2002, p55).

¹¹ Of course, some of the older bottlefed children may previously have been breastfed and even weaned off the breast for weight gain reasons – the presentation of the statistics does not allow analysis of this.

¹² Each participating mother received three questionnaires, at four-ten weeks; four-five months and eight-nine months.

¹³ Sixty-five percent of the intervention group and sixty-three percent of the control group were offering any breast milk to their babies by this stage.

Woolridge (1995b) reported that 66% of referrals to a specialist breastfeeding clinic in Bristol “related to concerns over the mother’s milk supply” (p13), with “slow or static infant weight gain or weight loss” for 96% of these (p25). Audits of telephone calls, received by one UK volunteer breastfeeding organisation, show that 11% mentioned concern about the baby’s weight (Broadfoot et al., 1999). Faltering growth was the concern that led to ten percent of the attendances at a health visitor-led breastfeeding clinic (Shulver & Shaw-Flach, 2004). Smale (1996), analysing her contacts with women during 10 years as a volunteer breastfeeding counsellor, found that just under five percent related to babies not gaining weight satisfactorily and these concerns often led to bottlefeeding.

These variations in percentages may relate partly to the nature of the evidence – it is unsurprising that women referred to a clinic within the health service (Woolridge, 1995b) should display a higher rate of difficulties than an entire cohort (Hamlyn et al., 2002; Wylie & Verber, 1994; Graffy et al., 2004b). Women may be less likely to seek help from volunteers about weight gain concerns, seeing these as more appropriately treated within the health care system; women may only contact volunteer supporters on this issue when they have “clashes of opinion” with health professionals (Smale, 1996, p170).

A case study detailing support from one infant feeding advisor illuminates the emotional effects of concern about weight (Brown, 2000). Once her baby began gaining, the mother avoided the clinic, finding visits “extremely stressful” and the advisor herself felt “fairly stressed about the well-being of the mother and baby” (Brown, 2000, p19)¹⁴.

Impact on Breastfeeding Experience

Qualitative studies have the potential to illuminate how regular weighing and attention to weight gain influences women, even where the baby may be gaining satisfactorily. In a phenomenological study in the Northwest of England, six out of the ten women interviewed expressed concerns they might not have adequate milk, with four discontinuing breastfeeding for this reason (Dykes & Williams, 1999). Women in this study who did not focus on the weight gain breastfed for longer. Fifteen low income women interviewed by Whelan and Lupton (1996) found that weight gain was “an important external verification” for breastfeeding (p 98). Mahon-Daly and Andrews (2002) made observations in a postnatal group and note that “simply falling off the percentile trajectory was often a lone reason for

¹⁴ The remedy for weight loss in this case lay in breastfeeding management techniques to increase the mother’s milk supply.

breastfeeding to be discouraged or questioned” by health visitors and mothers accepted this (p68). In an ethnographic study of interactions between mothers and health visitors in clinics in London and Sweden¹⁵ a few mothers supplemented or ceased to breastfeed in response to weight; the growth chart was an important source of assessing babies’ health (Olin Lauritzen, 1997; Olin Lauritzen & Sachs, 2001). Small USA studies have recorded similar findings (Leff et al., 1994; Marchand & Morrow, 1994).

Behague (1993) conducted an ethnographic study of the impact of weighing monitoring on breastfeeding in Brazil¹⁶. Women in a low socioeconomic setting of a shantytown, who had previously identified themselves as having ‘weak milk’, responded to weight monitoring positively. They valued the air of scientific authority conveyed by being able to refer to the chart and its interpretation. However, as they placed a strong emphasis on keeping infants’ weights up, they sometimes gave supplements in order to prevent falls in the weight. Thus, weighing, while valued by these mothers, impacted negatively on breastfeeding. Several features make it difficult to relate these findings wholesale to the UK, as women were from one social class and the strongest conclusions applied to those who had already questioned the adequacy of their milk supply. Weighing was conducted by medical students and not in the context of a relationship such as health visitors aspire to create.

Tracing through Time: infant feeding, weighing and health professionals

The decline of breastfeeding is a long-standing concern. Smith (1979) aptly noted: “Enthusiasts for breastfeeding seem always to posit a golden age a generation before their own bleak age of bottle feeders” (p84). Infant feeding is bound up with general patterns of infant and child care. For centuries wet nurses were employed by some mothers to replace maternal breastfeeding; this freed women of high social standing to produce family heirs, and women of the artisan class to contribute to family enterprises (Fildes, 1986; Dick, 1987; Fildes, 1988; Golden, 1996). Separation of productive and reproductive work evolved gradually. Increasing specialisation and changes in location of processes in workshops and factories moved men’s waged work outside the home (Lewis, 1997), and women were left with sole responsibility for childcare and household work in increasing isolation (Büskens, 2001). By the nineteenth century, mechanisation and advances in scientific processing made mass-marketed, commercially prepared breast milk substitutes viable and available (Wickes, 1953b; Nestlé

¹⁵ It is not clear if there was a difference in these findings between the two countries, an interesting finding as Swedish women are more likely to initiate breastfeeding and breastfeed for longer.

¹⁶ Although conducted in quite a different cultural setting, Behague’s (1993) study has often been quoted in UK literature, and so I have included it; also, this study is similar to mine in being an ethnographic study of the effects of weight monitoring.

undated; Apple, 1987; Palmer, 1993) and complete avoidance or early curtailment of breastfeeding a potential option for all women.

Inter-related developments in infant feeding, child welfare clinics, weighing practice, and the professions of paediatrics and health visiting can be traced. The Infant Welfare Movement arose from concern for the health and moral character of the working classes, with employment of the first health visitors, some of whom were nurses, others female sanitary inspectors (Lloyd, 1986; Dingwall & Eckelaar, 1988; Dingwall et al., 1988; Abbott and Wallace 1998). Clinics and schools for mothers were funded by local philanthropists; these offered feeding advice, clean milk, meals for mothers, and baby weighing (Wickes, 1953c; Dyehouse, 1978; Lloyd, 1986; Dwork, 1987). Wolf (2001) notes that, in Chicago, baby weighing was used as an inducement to attend; a handbill from 1908 hints at the same in London (Bunting 1907, cited in Dwork 1987, p147). The first English milk depot was set up in 1899 and provided weekly weighing (Wickes, 1953c; Smith, 1979). Pritchard (1904), a paediatrician, recommended weighing while noting mothers and nurses might object to “these new-fangled notions”, implying the novelty of the practice (p20): by 1913 Cran noted the ‘tyranny’ of the scales for breastfeeding mothers, implying a rapid spread of weight monitoring.

Regular weekly weight measurements were integral to the calculation of milk ‘formulas’, which were first prescribed for individual infants, then advertised for general application (Pritchard 1904; Apple, 1988; Palmer, 1993). Wickes (1952, 1953a) identifies a preoccupation dating from 18th century with dangers associated with overfeeding¹⁷ (see also Woolridge & Fisher, 1988). Regulation of infant intake of breast milk substitutes in order to match expected norms of growth was a core activity of the emerging profession of paediatrics (Cran, 1913; Wickes, 1953b; Armstrong, 1983; Armstrong, 1995; Brosco, 2001). Scientific approaches to infant feeding validated the profession of paediatrics; the scale and growth charts were the tools to accomplish this (Wickes, 1953b; Beekman 1977; Armstrong, 1995; Brosco, 2001). Armstrong (1995) relates this to the wider development of ‘surveillance medicine’ which targets and scrutinises whole populations: the growth chart exemplified the use of population norms to identify abnormality in an individual.

Choices around feeding babies happen in the context of previous experiences of pregnancy and birth. During the 19th and 20th centuries, women moved from having babies at home, attended by friends and midwives (Wilson, 1990), to hospital birth, supervised by doctors. A number of writers have tracked the change from birth as a social event within the family to a procedure on

¹⁷ Palmer (1993) reports personal experience of this concern with one of her children. Old preoccupations die hard.

the medical production line (Martin, 1987; Hunt & Symonds, 1995; Simonds, 2002; Dykes, 2004, 2005a). Breastfeeding also increasingly came under medical regulation, with set feeding intervals, feed amounts¹⁸ and timed feeds laid down for women to follow (Pritchard, 1904; Spence, 1938; Wickes 1952, 1953c; Smale, 1996; Dykes, 1997, 2004). Infants were to be enculturated to regular restrictions; patterns modelled on the factory and regulated by the clock (Wickes, 1953c; Smith, 1979; Fisher, 1982; Fisher, 1985; Millard, 1990; Simonds, 2002; Dykes, 2004, 2005b); with the injunction that “no reliance whatsoever can be placed on the infant’s own feelings in the matter” (Pritchard, 1907). During the 20th century routines were integral to the breastfeeding revival espoused by Truby King (1941; also Wickes, 1953c; Palmer, 1993; Smale, 1996), and only gradually lost their hegemony from the 1960’s with emphasis on more flexibility and the psychological development of the child (Cuthbert, 1954; Beekman, 1977; Armstrong, 1995; Hardyment, 1995; Brosco, 2001); although exhibiting a recent resurgence (Ford, 1999). Later recommendations for ‘demand feeding’ suggested that this would allow the baby to develop his or her own (innate) routine, rather than advocating unlimited on-going access to the breast (Smale, 1996; Dykes 2004, 2005a).

Clinics were gradually adopted by the state (Wickes, 1953c) and incorporated into the new National Health Service as fundamental to cradle-to-grave care (Viner, 1999); here health visitors weighed babies and disseminated advice to women with paediatric back-up for babies deemed of concern (Viner, 1999). Welfare foods and vitamins were also supplied. Grundy (1945) noted the effects of “obstructive anxieties” for “the [breastfeeding] mother who places reliance on frequent weighings in infant welfare centres stocked with packeted foods” (p41) (see also Douglas, 1950): this sounds remarkably similar to contemporary comments. Wickes (1952) noted clinic staff had a “morbid fear of over-feeding” (p453), while many mothers instead thought their babies were hungry, indicating that women were not simply passive recipients of information¹⁹.

Child care manuals, which often included weight charts (Liddiard, 1928, 1933, 1946) and women’s magazines popularised feeding advice (Nurse Crawford, 1937). Some manuals were produced by infant food companies (Cow & Gate, 1924) and some included advertisements in the front and end matter. By the 1960’s, bottlefeeding was an accepted and unremarkable infant feeding choice (Newson & Newson, 1962; Scowen 1989; Palmer, 1993). Companies making infant milks established relationships with medical personnel and provided information directly

¹⁸ Originally calculated by measuring the volume of the dissected stomachs of dead infants and dividing the amount of feed babies were theorised to need in 24 hours to three hour intervals (Klaus, 1987).

¹⁹ Carol Walton (born in 1943) recounts her mother refusing health visitor visits, saying “I have had four children and brought them up myself. I don’t need the state’s intervention with this one, thank you very much’.” (Devlin, ed; 1995, p 215).

to mothers (Apple, 1987; Palmer, 1993; Dykes, 2002) A theme of advertising messages continues to be the efficacy of the product in promoting growth (e.g. Cow & Gate, 2005).

From the 1970's, an increased interest in the promotion of breastfeeding began (Scowan, 1989), and new scientific evidence of the health detriment to babies who are not breastfed began to accumulate (Heinig & Dewey, 1996; American Academy of Pediatrics [AAP], 2005) and the effects on the health of their mothers (Heinig & Dewey, 1997; AAP, 2005). The earlier preoccupation with overfeeding (Wickes, 1952) seems to have changed to concern that breastfed babies might be undernourished (Davies, 1979). This has not been well documented, but may reflect an era of easy access to plentiful, cheap breast milk substitutes and the effects of decades of advertising. In a culture where most infants were bottlefed, their greater weight gain after two or three months may simply have appeared normal.

It can be seen that women are and have long been the targets of authoritatively articulated sets of advice on feeding and on the expected growth of their infants (Millard, 1990; Dyball, 1992; Smale, 1996; Dykes, 2004). It is not clear the upsurge in breastfeeding initiation was a result of professional urging; it may reflect a trend toward the 'natural' (Dyball, 1992; Dykes, 1997). One effect of changes over time is that new mothers in the 21st century may have people around them – family members or health professionals – who have been socialised in eras with differing infant feeding patterns and norms, creating conflicting expectations (Leach, 1994; Dykes & Griffiths, 1998).

Contemporary Issues

Current Health Visitor Care

Midwives provide support in pregnancy, during birth and in the early postpartum; and women easily identify their role but have greater difficulty understanding what health visitors do (Plastow, 2000). The health visitors' role has been subject to periodic reappraisal, so the focus of practice has shifted over time (Billingham & Hall, 1998; Plastow, 2000; Brocklehurst, 2004; Carr, 2005) with a "long-standing debate on the lack of clarity on core work" within the profession (Pritchard, 2005, p237). It is unclear from the literature whether health visitors have decided to consider breastfeeding support as part of their core work, or whether breastfeeding difficulties are some of the health needs to be sought out and addressed on an individual basis.

Following initial home visits²⁰, women attend clinics where babies are weighed, length and head circumference measured, and information or advice on baby care sought and given. Health visitors are available, but other workers or volunteers may undertake some of these tasks. Surveys indicate that a high percentage of parents give baby weighing as their reason for attending clinic (Biswas & Sands, 1984; Sefi & MacFarlane, 1985; Sharpe & Lowenthal, 1992). Hall and Elliman (2003) assert that “Parents are reassured if they know that their baby is gaining weight” (p177). Visiting the clinic and having the baby weighed is an expected activity for new parents. Davies (2000) remarks that “it would take more than an Act of Parliament to stop it” (p201). Although women may also come to clinics for feeding advice²¹ (Gastrell, 1986; Sharpe & Lowenthal, 1992; Carter & Bannon, 1997; Hamlyn et al., 2002) there is evidence that women do not view clinics as places for accessing breastfeeding information or support (Dyball, 1992; Ker, 2001; Mahon-Daly & Andrews, 2002).

Professional education of health visitors does not include practical or in-depth training on helping women with breastfeeding (Hyde, 1994; Robertson & Goddard, 1997; Shaw-Flach, 1998; UNICEF UK Baby Friendly Initiative, 2002). However, no alternative statutory structure of community breastfeeding support exists, so it has fallen to health visitors – some of whom embrace it enthusiastically (Cowpe et al., 1992; Shaw-Flach, 2003). Others do not appear to value their own potential in helping women with breastfeeding (Halnan, 1998).

Some women report health visitors as their major support after leaving hospital (Bowes & Domokos, 1998), while others say they do not wish to discuss breastfeeding with them (Ker, 2001). A systematic review found that extra support had a beneficial effect on the duration of breastfeeding, indicating current support is not adequate (Sikorski et al., 2002, 2003). The National Childbirth Trust [NCT] (1996) consulted 750 of its members, two-thirds of whom felt that health visitors’ knowledge was outdated and did not support “non-bottle-feeding mothers” (p15). The Association of Breastfeeding Mothers [ABM] (2005) issued a call for health visitors to be “knowledgeable and skilled in breastfeeding issues”, on behalf of women who had not found this to be so (p155).

Growth charts are included in the parent-held child health record (PCHR), introduced in 1991 and gradually adopted throughout the UK (Jackson, 1990; Owen, 1991). The acceptance of these records has been evaluated, but not the impact of including the chart (Polnay, 1994; Emond et al., 1995; Cormack et al., 1998; Davies, 1999a, 1999b; Hampshire et al., 2004).

²⁰ The trend over time has been for fewer home visits and greater contact at clinics.

²¹ Surveys usually do not distinguish between different types of feeding, so this may be bottlefeeding advice or advice with weaning onto solids.

Previous parent-held records had weights written, not charted, and any gain could be seen as positive. Jackson (1990) noted criticism of a draft PCHR that the “centile charts are unclear” (p221), but does not say what aspect was unclear. It is unknown if any changes were made before publication.

The notes supplied in the current PCHR do not introduce the chart or explain its interpretation in a way likely to be useful to parents (Child Growth Foundation [CGF] & Royal College of Paediatrics and Child Health [RCPCH], 2004; Sachs et al., 2006). A Cochrane Review concluded that women’s understanding of the purpose of growth monitoring, and any potential anxieties it might cause have not been well investigated (Panpanich & Garner, 1999; Garner et al., 2000).

There appears to be no single standard text used in training of health visitors in the interpretation of plotted centile charts. A Health Visitors’ Association (1979) publication introduced the concept²², showing several sample charts with notes on interpretation²³. A more recent booklet gives information on taking good measurements, and covers a few issues of interpretation (none directly related to the breastfed baby), but is extremely brief (CGF, 2001). De Onis and Victora (2004) point to a worldwide need for training for professionals.

Health visitors routinely discuss weights with parents. As well as understanding charted weights, health professionals need to be able to convey information clearly. No material discussing ways of explaining growth patterns to parents has been found. Nor is there a discussion of how to convey information that frequent weighing may over-emphasise minor fluctuations.

Approval of the growth pattern may be expressed by health visitors when weight conforms to the centiles, implying that fluctuations off the line are of concern. Olin Lauritzen and Sachs (2001), in clinic observations and interviews with Swedish and English mothers, found that weighing encounters encouraged mothers to see their baby’s weight and health in relation to the norm of the chart. One mother told how “instead of thinking that he is thriving...you become fixated on figures and graphs” (p509). Some women interviewed by Dykes and Williams (1999) found the “visual display of weight ... worrying [when] the babies were not progressing steadily along their centile” (p236). Women may introduce formula supplements in response

²² This would be at the time that the Tanner Whitehouse centile chart was being introduced.

²³ My copy, bought in a second-hand bookshop near the home of one of the women in the study, has a bookplate stating “presented by Courtesy of Cow & Gate in the Interest of Child Health” – presumably this was a copy given to a health visitor or other professional.

to perceived weight difficulties without consulting health visitors – thus anticipatory guidance is indicated.

A cost analysis of child health surveillance found that just over two minutes was spent talking about feeding at the six-to-eight week check, indicating, at best, superficial discussion (Sanderson et al., 2001). Fulford (2001), describes dissatisfaction of health visitors themselves with drop-in clinics which were “rushed”, where “often babies were just weighed” without time for “meaningful consultation” (p386).

Growth Chart Controversies

Internationally, WHO adopted growth reference charts to aid in combating malnutrition (Garza et al., 1994). A recent survey found that regular weighing and “growth charts are used universally in pediatric care”, (de Onis et al., 2004, p461). The data collected for the first year of the 1977 WHO international chart came from Ohio, USA in 1929, where most infants had been formula-fed. Studies conducted in the 1980’s showed a consistent mismatch between the shape of growth trajectories of healthy breastfed infants, in various settings, and the shape of the centiles on this chart. This difference, in which breastfed babies’ weight rises more steeply than the reference curve in the early days, and then appears to gently ‘falter’ or dip below the chart centiles, was accepted to be “physiologically determined” (Garza et al., 1994, p6; Kramer et al., 2004). Concern was raised that “the negative deviations [between the growth trajectory of breastfed babies and the curve of the chart centile] are large enough to lead health workers to make faulty decisions regarding the adequate growth of breastfed infants and thus to mistakenly advise mothers to supplement unnecessarily or to stop breastfeeding altogether” (de Onis et al., 1997, pe8).

In response, a WHO Growth Study Group proposed to collect prospective longitudinal data from seven countries, selecting babies from relatively advantaged families, with no socioeconomic or environmental constraints on growth (Garza & de Onis, 1999; WHO Working Group on the Growth Reference Protocol, 2000) and who were exclusively breastfed for at least four months²⁴. Women were offered extra support for breastfeeding (de Onis & Victora, 2004). This chart is currently being tested and is expected to be available in 2006: the declared next step is to develop guidelines for interpretation in clinical use (WHO Working Group on Infant Growth, 1995; Garza & de Onis, 1997; de Onis & Victora, 2004; Garza & de Onis, 2004).

²⁴ The WHO recommendation at this time was for babies to be exclusively breastfed for four to six months.

In the UK, the Tanner Whitehouse chart was used (Goldstein & Tanner, 1980; Gerein, 1988), and in 1990 an updated chart was introduced, in response to concerns that the secular trend, or changes in growth over time, meant the population was no longer well-represented. Tanner Whitehouse data had only been collected in London and was not nationally representative (Freeman et al., 1995; Fry, 1994; Hulse & Schilg, 1995). The RCPCH, state that the “UK90 reference ...is the only useable reference that can be recommended” (Wright et al., 2002, p13). Savage et al. (1998) prospectively measured the growth of 127 Scottish infants (39% of whom were breastfed for at least two months), confirming the new chart as appropriate for clinical use. It is, however, not known if every authority now uses it²⁵.

The UK90 chart includes two data sets, some of whom were breastfed, some bottlefed from birth, or an early age, and some for whom no data is recorded (British Standards Institute, 1990; Freeman et al., 1995; Cole et al., 1998; Cole et al., 2002). As far as can be ascertained, the majority of babies used for the chart were breastfed in the early months (Sachs et al., 2005; Walshaw & Owens, 2005). Because there is no one easily accessed description of what is known of the feeding history of the infants in the UK90 chart, this may have led to a simple assumption that the international critique of growth charts as poor tools to assess the growth trajectory of breastfed babies was transferable. There does appear to be a popular perception that, as one distraught mother put it “those evil weight charts health visitors worship as their bible, are only based on white babies who are bottlefed” (Saxby-Bridger, 2000, p10; also Hanss, 2004). In some cases when individual breastfed babies are seen not to be growing along the centiles on the UK90 chart, attention appears to focus on the validity of the chart, with the perception that simply using a different tool could erase concern²⁶ (Thompson²⁷, 2003).

UK Chart for Breastfed Babies

In 2002 a new ‘Breast from Birth’ chart, based on data of babies in the UK90 data set who were breastfed for a minimum of 24 weeks, was presented as a tool to avert “pressure on the mother to switch the child to formula or complementary food prematurely” (Cole et al., 2002, p1296; also Fry, 2002). This is available for purchase and insertion in the PCHR. Williams (2002a) welcomed the chart for clinical use, as a way to focus attention on the distinctive shape of

²⁵ In a presentation Wright in April, 2005, indicated that some areas have not adopted it. It is available on the internet where a weight and the baby’s age can be input and a chart with this one point plotted is presented (<http://www.health-for-all-children.co.uk/>).

²⁶ This is certainly the case in my anecdotal contacts with mothers, fellow volunteers and health professionals over the years.

²⁷ At the time of publication, Thompson was employed by the Department of Health as one of the National Breastfeeding Advisors, giving her comments some authority.

breastfed baby's centiles, although he considers it may understate these differences and Fry²⁸ (2003) argues it should become the norm for all UK babies. The RCPCH, however, expressed caution about its validity (Elliman & Bedford, 2002). It is unknown how widely it is used²⁹. It should be noted that in a cohort study of babies in the UK, only 3% were exclusively breastfeeding at four months (Kelly & Watt, 2005): a chart based on breastfed baby data therefore does not reflect actual feeding patterns and would have to be seen as a standard.

It seems probable that when the WHO chart is available, discussions about using a breastfed baby reference routinely will intensify³⁰ (Wright, 2005; Sachs, 2005; Sachs et al., 2005). As noted, WHO investment in a new growth chart based on breastfed babies derives from the concern that using the previous chart led to inappropriate recommendations to supplement. However, I have found no study comparing the clinical use of a conventional chart and a breastfed baby chart on outcomes such as duration of breastfeeding, use of supplements, or confidence in breastfeeding. Would a different chart really improve care?

Accuracy of Weighing Practice

Issues of weighing and recording accuracy are important where charted weight is used to make clinical decisions. Davies and Williams (1983) drew attention to poor clinic practice: babies were not necessarily weighed naked, on well calibrated scales, or weights plotted on charts. Several decades later, Davies (2000), asserted there had been little change in the accuracy of practice.

A number of elements need to be attended to for measured weights to be meaningful. Electronic, self-zeroing scales are recommended (Hall & Elliman, 2003); it is unknown how many areas have provided these for all clinics and health visitors for home visits. In Nottingham all scales in community use for weighing babies – standard, balance and electronic – were tested and 91% of readings were deemed acceptable at within 30 grams³¹. The electronic scales were most accurate – but were also the newest (Steiger & Polnay, 1996). In a Coventry

²⁸ Mr Fry is the chairman of the Child Growth Foundation, which is both the umbrella charity for individuals with hormonal growth disorders and their parents, and which produces the UK90 and the 'Breast from Birth' charts. An advertisement (CGF, 2005) reiterates the call for this chart to be used for all babies, while giving information as to where they can be bought.

²⁹ Or if it is used prospectively for all breastfed babies or it is 'switched' to if a baby's growth begins to exhibit concern.–

³⁰ A conference where Dr de Onis spoke about the chart (2005) was widely reported in the UK national press and baby magazines as if the criticisms of the international chart pertained to the UK90 chart (Boseley, 2005; Godridge, 2005; Lichtarowicz, 2005; Lister, 2005; Practical Parenting, 2005; Symons, 2005)

³¹ An error of 30 grams could be enough to spark concern or even intervention.

study 30% of the scales, of a variety of types, were found to be outside a range of +/- 20 gm for the ten kg weight (Spencer et al., 1996).

To determine the effects of clothing and diurnal variation, Alsop-Shields and Alexander (1997) conducted a study with seven babies in an Australian community clinic³². Each baby's weight varied over the course of 24 hours, with no universal tendency – some grew heavier, others lighter. Over time, women may attend one of several local clinics held at different times of day so affecting recorded weight measurements. Naked weighing is recommended (Davies & Williams, 1983; Hall & Elliman, 2003) but it is not known how universally it is practiced³³. Spencer et al. (1996) discovered that a number of clinic premises were not warm enough for naked weighing. Alsop-Shields and Alexander (1997) showed that estimating weights of garments contributes to variation in recording.

The only published UK audit of plotting accuracy showed a striking 28.55% of the 611 points for 50 premature infants during their first year were incorrectly plotted (Cooney et al., 1994). Most (94.7%) of the errors were with respect to age, either through failure to correctly adjust for gestational age or through misreading dates, the former of which would not apply to full term babies. Hall and Elliman (2003) cite inaccurate measurement and charting as one reason for poor performance of monitoring. Wright (2002) reminds that “plotting growth charts is difficult and should not be done in a rush while talking to parents” (p279). Hall and Elliman (2003) suggest that weighing be done in consistent relation to feeding: if a baby is weighed just after a feed, the same is done the following time. It is unknown if, or how, or if, the effect of variation due to weighing at different times of day, in different relation to feeds and in clothing is conveyed to parents.

The level of accuracy of recorded weights remains relatively under-examined, but a decision to supplement breastfeeding may be based on these.

Weighing Frequency

Weight monitoring is asserted not to be a screening procedure (Hall, 2000a; National Screening Committee, 2000). Children who have a sustained fall through two centile spaces “only constitute a high risk group who would merit closer investigation, rather than a definite

³² No similar study conducted in the UK has been located. The Australian community clinic system is similar to that in the UK.

³³ Throughout the course of this thesis I have had the opportunity to speak to many colleagues in The Breastfeeding Network about practice in their area and their anecdotal testimony supports a very diverse picture with almost every element of weighing – are babies naked, who does it, what scales are used, etc. – subject to local custom.

diagnostic group” (Wright, 2000, p7). It is unclear how far parents understand that plotted centiles require interpretation rather than representing an actual danger to the baby. Fry (1997, 2000a, b, c) warns of possible legal action by parents of children with growth disorders which are not diagnosed, and suggests frequent weighing, asserting that many health visitors will monitor “because they intuitively know it to be of value” (Fry, 2000c, p615).

A 1998 meeting of paediatricians produced a ‘Coventry Consensus’ recommendation that after a birth weight, babies “should only be weighed at immunisation and surveillance contacts, and should not be weighed more than once every two weeks under the age of six months and once a month thereafter”, so there are fewer weighing episodes, but more attention is paid to them (Wright, 2000, p7; Hall, 2000a). The ‘Coventry’ frequency is incorporated in guidance (Hall & Elliman, 2003) but there is no report of its implementation³⁴.

Hall and Elliman (2003) acknowledge that parents “will continue asking for facilities for their baby to be weighed or to weigh the baby themselves” (p180). At four-five months, nine percent of women go to clinic weekly, a further 34% once a fortnight (Hamlyn et al., 2002). It is likely that frequency is greater at earlier ages. I have discovered no discussion of how health visitors might encourage parents to weigh less frequently; there is no note in the PCHR of this recommended frequency or list of possible disadvantages of more frequent routine weighing.

Panpanich and Garner (1999; Garner et al., 2000), highlight the amount of health worker time invested (worldwide) in routine weighing, with little evaluation of the outcomes. Sanderson et al. (2001) timed health visitors at the six-to-eight week check. They spent an average 31.3 seconds (cost 11 pence) weighing babies and discussed feeding for 144 seconds (cost 53 pence). If weighing is weekly or fortnightly, costs add up. The brevity of feeding discussions observed also raises concern about the quality of interaction with parents (Gerein, 1988). Ross and English (2005) concluded that, in Kenya, time and resources and would be better spent with ‘pragmatic’ rather than routine weighing, and time thus saved put toward breastfeeding promotion.

Interpreting Charted Growth

The difficulty of explaining complexities of growth has been discussed with reference to developing countries (Morley, 1993, 1996; Meeghan and Morley, 1999). Morley (1993) notes that; “even the simplest chart is difficult to understand” (p98), while Hall (2000b) emphasises

³⁴ It may be of interest to note that the Coventry meeting was arranged by The Child Growth Foundation and one of the supporting organisations was Cow and Gate, a company which manufactures infant formula milks, available in the UK (Hall, 2000a).

“recognising abnormal growth is difficult” (p699). If weight deviates from a particular centile³⁵, this may indicate one of several normal patterns, or suggest cause for investigation.

Catch-up and catch-down growth occur where a baby, relatively under- or over-nourished in the womb, climbs up or down the centiles to a genetic growth pattern (Tanner, 1984; Dettwyler & Fishman, 1992; Marcovitch, 1994). Chee (1997) suggests catch-down may be more likely in breastfed babies, as the initiation of breastfeeding is higher among women of higher social classes, whose babies are likely to attain maximal growth in the womb (Hamlyn et al., 2002). A recent retrospective US analysis showed 39% of babies crossed two percentiles of weight-for age (one usual ‘rule of thumb’ for referral and investigation) in their first six months: clinicians need to be aware that catch-up growth and catch-down growth during early childhood are normal phenomena affecting large numbers of children (Mei et al., 2004).

This complicates interpretation of a charted growth curve. When should further investigation or intervention be sought? Corbett et al. (1994) emphasise that it is the shape of the weight change trajectory which should be studied, not just a fall below an absolute limit, although this may be commonly used, a change of two standard deviations or centile spaces is the preferred indicator for a referral (Wright, 2000). ‘Thrive Lines’ (CGF, 1996), printed on acetate, are available to place over the plotted growth chart and measure whether weight change is greater or less than two centiles (Cole 1997). Fry (2002) asserts that one-third of practitioners use these, but does not give evidence. Such a tool encourages treating weight deviation as the absolute criteria for referral, de-emphasising reliance on other clinical signs, attention to the whole baby, and the whole feeding experience. The different centile shape of breastfed babies’ growth adds to interpretation difficulties when using a chart only partially based on breastfed infants such as the UK90. De Onis and Victora (2004) suggest “anticipatory guidance to warn parents about the imperfections” of charts (p85). I have found no mention of practitioners doing this routinely in the UK.

Spencer et al. (1996) gave clinic-based health professionals four ‘test’ charts. Thirty-three percent misclassified a ‘catch down’ pattern of growth as ‘poor weight gain’, 15% thought the chart showing transient poor weight gain indicated ‘failure to thrive’, and two percent mistook the growth of a normal small baby for either ‘poor weight gain’ or ‘failure to thrive’³⁶. If repeated in practice, such misinterpretations could lead to unnecessary referral and worry. Three percent (two individuals) also failed to identify correctly one chart which depicted ‘gross

³⁵ And bearing in mind that each centile point is the result of an averaged set of data – no one child should be expected to grow on one single centile (Hall, 2000b).

³⁶ The authors comment that there was no difference in the accuracy of interpretation between the health visitors/practice nurses and GPs/Community Medical Officers in this study.

failure to thrive', showing that a high rate of what would have been unnecessary referrals did not ensure that all babies who should have been of concern would be identified. The use of sample charts in this study may tend to emphasise the chart as a stand-alone diagnostic tool, as no case history was supplied. Batchelor and Kerslake (1990) also highlighted poor rates of recognition of faltering growth by health visitors.

Failure to thrive (FTT), now usually termed 'faltering growth'³⁷ (Underdown & Birks, 1999), is the main condition sought for in weight monitoring programmes (Wright, 2000) and may be the 'disorder' that parents fear. Wright (2002) provides brief pointers on distinguishing it from catch-down growth. Differences between FTT and slow weight gain in breastfed babies are listed in two US texts (Lawrence & Lawrence, 1999; Mohrbacher & Stock, 2003); consideration of overall appearance, urine and stool output and breastfeeding indicators, as well as weight patterns aid differentiation³⁸. Lawrence and Lawrence (1999) emphasise that faltering growth is a symptom, not a cause or distinct condition and further give the vital reminder that faltering growth in a breastfed baby does not automatically indicate a failure of breastfeeding. The literature – which is sizable – does not often give correlations between method of milk feeding (breast only, breast and bottle or bottle only) and identified weight faltering. A retrospective audit of four years' of US paediatric records found that, of babies with identified growth faltering, in some breastfeeding problems were considered the cause, but one in five had underlying illnesses (Lukefahr, 1990). In such cases, a change to formula feeding could pose an additional physical challenge to the baby³⁹.

In the UK, infants of concern are referred to either a General Practitioner or a paediatrician: no study has examined their knowledge of breastfeeding and infant growth. A survey of US physicians discovered that, although 99% plotted weights, only five percent were aware of the different velocity of breastfed baby curves (Guisse & Freed, 2000). A clinical review by a UK paediatrician includes a discussion of breastfeeding failure as a cause for FTT (Marcovitch, 1994). This was robustly critiqued by three senior midwives who suggested attention to the mother's breastfeeding 'style' and positioning technique would be the most effective intervention (Alexander et al., 1994). A case presentation for paediatricians emphasised that growth faltering in a breastfed baby requires the application of "biopsychosocial pediatric" care (Stein et al., 2004, p1468). A health visiting model for intervention for failure to thrive does not include specialised breastfeeding assessment, or referral to breastfeeding specialists

³⁷ I use the older term where it is used in the literature discussed.

³⁸ It is unknown how many health visitors have ready access to either of these texts. Anecdotally, Mohrbacher and Stock (2003) is the book which may be chosen for use in child health clinics, where there is any breastfeeding reference available.

³⁹ And might not improve the weight gain.

(Blissett et al., 2002), and breastfeeding specialists are not mentioned in a multi-disciplinary consensus statement (The Children's Society, 2002)

Concern about increased incidence of obesity and overweight, and the recognition that formula feeding accelerates weight gain above biological norms (Kramer et al., 2004), has prompted attention to early feeding methods. While the multi-factorial aetiology makes effects difficult to study, it appears that children who were not breastfed have higher incidences of overweight and obesity (Von Kreis et al., 1999; Gillman, 2001; Heidiger et al., 2001; Armstrong et al., 2002; Toschke et al., 2002, Bergmann et al., 2003; Dewey 2003; Grummer-Strawn and Mei, 2004). Currently there are no agreed criteria for triggering intervention against obesity in infancy; this may become more of a concern as awareness increases.

Blair et al. (2000) showed that infants who had died of sudden infant death syndrome had a poor postnatal weight gain, and suggest they might be prospectively identified at six weeks. Logan and Bedford (2000) challenge this, both because using the proposed identification would create a large number of 'false positives', and because no preventative intervention is available. Rudolf and Logan (2005) reviewed the outcomes generally for children identified as having failed to thrive and conclude that "there is little robust evidence [...] that intervention is associated with clear long term benefit" (p930).

Breastfeeding and Growth: effects of breastfeeding style and breastfeeding management

Breastfeeding 'Style'

The conditions which regulate breast milk production appear to be "primarily a function of breastfeeding behaviour", which are socioculturally determined (Obermeyer & Castle, 1997). Carvalho et al. (1983) found babies randomised to be fed on a three-four hourly schedule were lighter at 15 days than babies fed 'ad lib', although the difference had vanished by 35 days. A study of 62 US babies, found a strong association between growth and breastfeeding 'style': a composite measure of feed frequency, feed length and feed flexibility⁴⁰ (Quandt, 1985, 1986). Babies who were exclusively breastfed longest both fed more often during 24 hours and were fatter at one month⁴¹. Woolridge (1995a, b, 1996) explains this by proposing milk fat content rather than quantity as the key aspect of growth, suggesting that babies can regulate their own fat intake if mothers respond to their feeding cues and they can feed as they require (Woolridge & Fisher, 1988; Woolridge et al., 1988). Breast milk fat composition varies throughout an

⁴⁰ That is, feeding in response to infant cues rather than by a pre-determined timetable.

⁴¹ Of course, the issue of reverse causality proposed by Kramer et al. (2002) may be at work here – that babies who were able to grow well on their mothers milk were the ones who continued to be exclusively breastfed.

individual feed and between feeds throughout 24 hours and is related to interfeed interval. The shorter the interval, the higher the fat content of the milk at the start of the next feed⁴² (Daly & Hartmann, 1995a, b; Hartmann, 1996; Mitoulas et al., 2002; Ramsay et al., 2005). Effective breastfeeding technique also influences the ability of the baby to access optimal fat during a feed (Renfrew et al., 2000). A growing understanding of milk production physiology (Daly & Hartmann, 1995a, b; Hartmann 1996; Cregan & Hartmann, 1999; Mitoulas et al., 2002; Ramsay et al., 2005) explains how biological differences of breast capacity between individual women in tandem with a particular baby may mean that culturally imposed patterns (avoiding night breastfeeds; aiming for longer interfeed intervals) can impact on the milk production of women with relatively smaller breast capacity.

In a prospective, longitudinal study, 506 Swedish mothers committed to breastfeeding kept daily records of the number of breastfeeds and any supplements given. Once a fortnight, a record of timing and duration of feeds was made, with a visit from a researcher (Hörmell et al., 1999). Wide variations between mother-baby pairs were recorded, with an association between a longer duration of both exclusive breastfeeding, and any breastfeeding, with an increased frequency of feeds. At four months 159 of 189 exclusively breast milk fed infants were fed at night – 48% once, and one baby five times. All the mothers considered that they fed ‘on-demand’. The differing patterns of demand may reflect different physical storage capacities in different mothers; or the capacity may be the result of the interaction of maternal physiology and infant suckling patterns (Ramsay et al., 2005). These results indicate the variability of breastfeeding.

Kramer et al. (2002) found that the mean weight of all babies in an intervention group of breastfed babies born in hospitals randomised to provide ‘Baby Friendly’ care, was significantly higher at one month. The difference increased until three months, and then declined. At three months, 43.3% of intervention babies were exclusively breastfeeding, compared to 6.4% of controls. This suggests that support for practices which encourage the establishment and maintenance of exclusive breastfeeding may result in different breastfeeding styles, and greater early growth.

Insufficient Milk

“Insufficient milk” is the most common reason given for stopping breastfeeding between one week and four months (Hamlyn et al., 2000, p 134). This has long been a major trigger for

⁴² This is counter-intuitive to mothers and health professionals! As I have read and taken on board the implications of this body of research I have found that this is a novel and intriguing concept to those I have explained it to.

early cessation or supplementation of breastfeeding, both in the UK (Newson & Newson, 1962; White et al., 1992) and internationally (Gussler & Breimeister, 1980; Greiner et al., 1981). Newson and Newson (1962) surveyed more than 700 Nottingham women; of those who began breastfeeding but stopped in the first two weeks, 72% cited “some reason connected to the quantity or quality of their milk” (p1744), although probing discovered over half of these had not wanted to breastfeed anyway. Such findings led to the suggestion that this ‘syndrome’ supplies an acceptable excuse for not breastfeeding. International debate identified that insufficient milk could result from social conditions which led to mother-baby separation (Gussler & Breimeister, 1980), and advertising strategies of companies which present their products as solutions to lack of breast milk and lack of breastfeeding knowledge among mothers and health workers (Greiner et al., 1981; Tully & Dewey, 1985). Concern at the probable failure of the maternal body to be able to nourish her infant is based on cultural attitudes to women and is fuelled by advertising and the breastfeeding knowledge deficit of professionals (Tully & Dewey, 1985; Obermeyer & Castle, 1997; Zeitlin & Rowshan, 1997). Perceptions of being unable to supply enough milk to nourish a baby are historically entrenched and incorporated into most global cultures (Obermeyer and Castle, 1997). A recent UK survey found that 87% of women believe that “some women don’t produce enough milk” (Community Practitioner, 2005, p161). Renfrew et al. (2005) note that “it is astonishing that there remains such a lack of good evidence [...] in relation to the leading cause of breastfeeding failure worldwide” (p104).

It is proposed that baby behaviour (crying, wish for frequent maternal contact), poor understanding of breastfeeding physiology and concern about charted weight may trigger the use of supplements. This, in turn, impacts negatively on supply through the decrease in suckling and milk removal, shifting fear into reality (Greiner et al., 1981). When breastfed babies’ weight is plotted on inappropriate charts this may compound the issue (Williams, 2002a).

‘Insufficient milk’ should not be dismissed as simply a perception of women. In a Swedish study, 51 women committed to breastfeeding were followed longitudinally to 18 months. Those who experienced ‘transient lactation crises’, and doubted the adequacy of their milk supply, had babies who were consistently lighter than others – although all babies in the study grew well (Hillervik-Lindquist, 1991; Hillervik-Lindquist et al., 1991). Thus an understanding for an individual mother that milk supply is sometimes problematic may be related to physical production which is just enough, rather than bountiful, for her individual baby. No study has satisfactorily investigated the complex, inter-related biological, physiological, cultural and

iatrogenic components of the ‘insufficient milk syndrome’. Its relation to recorded weight gain, for UK mothers, also remains poorly investigated (Renfrew et al., 2005).

Interventions

When weight gain is of concern, there is a paucity of research evidence on interventions to improve this.

Supplementation

I identified no study which investigated when supplements were needed to remedy poor weight gain, and discovered no protocol for how much and how to offer supplements. It appears that women either simply decide for themselves how much to give, or that individual health visitors advise them: it is unclear what either group bases this on. There appear to be no published criteria for deciding when the disadvantage of interrupting exclusive breastfeeding is outweighed by the need for greater weight gain through supplementation. Indeed, the desired outcome of increased weight gain upon changing to formula is not documented in the literature. Formula feeding remains astonishingly under-researched (Renfrew et al., 2003).

Changes to Breastfeeding ‘Style’

Vinther and Helsing (1997), in a WHO manual, state that rather than supplementation, weight gain should be improved by attending to attachment and positioning and the pattern and duration of feeding (also Renfrew et al., 2000). Newman (1996) and Powers (1999, 2001) suggest increasing the number and frequency of feeds in cases of poor weight gain, but the evidence that these work is from clinical observation rather than randomised or controlled trials (Powers, 1999). Renfrew et al. (2005) identified an “urgent need” for research into this issue (p2). Blisset et al. (2002) include in a general discussion of interventions for FTT the recommendation that food be offered every 2 hours. This is not explicitly related to breastfeeding, but is intriguing. Parents are often interested in spacing out and curtailing milk feeds and “breastfeeding took too long”, is given by more than 10% of women who stopped breastfeeding as the reason for doing so in the first four months (Hamlyn et al., 2002, p134).

Positioning and Attachment

Positioning (placement of the body of the mother and how she holds her baby) and attachment (how the baby takes the breast into his mouth) have been suggested as crucial to the physical

success of breastfeeding (Renfrew, 1989; Inch & Fisher, 1999; Renfrew et al., 2000). Studies have investigated whether teaching women elements of these can affect outcomes such as breastfeeding duration. Some involved an assessment or teaching intervention soon after birth (Righarde & Alade, 1992; Henderson et al., 2001; Lebarere et al., 2003), others combined this with ensuring that subsequent advice was congruent with the intervention advice (Woods et al., 2001; Ingram et al., 2002). Henderson et al. (2001) and Lebarere et al. (2003) reported no effect, while others reported a variety of improved outcomes, indicating that interventions need to be well structured, delivered and followed-through. There appears to be no study of an intervention of correcting positioning and attachment in cases of poor weight gain. Experience of enthusiastic clinicians suggests that this is effective, but this remains untried (Newman, 1996; Powers, 1999; Inch & Fisher, 1999; Powers, 2001). Hall Moran et al. (2000) investigated six tools designed to evaluate breastfeeding and found that these were poorly based on research, and reduced complex interactions to a simple numerical score.

None of the women in Ker's (2001) study reported health visitors offering assistance with positioning and attachment. Women value being taught the practical skills of breastfeeding; and find this more useful than just verbal encouragement (Hoddinott and Pill, 1999, b, 2000; Gill, 2001). Attention to the language used in interventions which involve assessing and improving the positioning and attachment of the baby is crucial (Smale, 1998; Simmons, 2002). If women were told that "faulty positioning was the problem [...] this was often perceived by women to mean that it was their fault, leading to feelings of guilt and loss of confidence" (Hoddinott & Pill, 2000, p230).

Currently babies whose weight is of concern in the UK are referred to paediatricians. If there are breastfeeding difficulties implicated in the weight issue, and the mother's own health visitor is unable to help, there is no routine system of specialist evaluation of, or support for, breastfeeding available (Renfrew et al., 2000), although in some areas there may be a midwife who takes referrals, a breastfeeding support group, a specialist clinic or lactation consultant (Inch & Fisher, 1999; Brown, 2000). Hauck et al. (2002) noted that women with breastfeeding difficulties valued "unhurried individual assessment" rather than "standardised advice" (p9).

Qualitative Research on Women's Experience of Breastfeeding

Breastfeeding has been studied by researchers from a wide number of disciplines. Harrison et al. (1984) conducted a content analysis on medical, social science and 'lay' literatures, highlighting differences in types of questions and outcomes considered, inherent in the underlying epistemological assumptions of the researcher. Maclean (1989a, b) voiced

dissatisfaction with research which did not capture the complexities of breastfeeding experience; and called for researchers to elicit meanings from women's points of view.

In subsequent decades qualitative breastfeeding research has been conducted by researchers from a variety of disciplines, including medicine (Hoddinott, 1998; Graffy et al., 2004a); midwifery and nursing (Rogan et al., 1997; Morse & Bottorff 1988, 1989; Schmied & Barclay, 1999; Hughes & Rees, 2000; Hauck et al., 2002, Cloherty, 2003; Dykes, 2004); health visiting (Shaw-Flach, 2002), public health (Binns & Scott, 2002; Scott & Mostyn, 2003); women's studies (Stearns, 1999; Hausman, 2003), sociology (Carter, 1995; Blum 1993; 1999); geography (Bailey, 2001; Pain et al., 2001, Bailey et al., 2004); anthropology (Balsalmo, 1992; van Esterik, 1989; Britton, 2000); history (Fildes, 1986; Apple, 1988; Golden, 1996; Wolf, 2001) and from a department of family and household research (Miller, 2002)⁴³. This indicates some of the many facets of the breastfeeding experience⁴⁴.

Studies have been conducted using different methods, such as focus groups (Shaw et al., 2003, Ingram et al., 2004), phenomenology (Dykes & Williams, 1999; Shaw-Flach, 2003); participant observation (Mahon-Daly & Andrews, 2002) and ethnographic approaches (van Esterik, 1989; Maclean, 1989b; Blum, 1999; Gill, 2001; Cloherty et al., 2003; Ingram et al., 2004; Dykes, 2004, 2005a, b). In turn these methods may be grounded in different theoretical approaches (Hausman, 2003; Dykes, 2004).

Some researchers have conducted general studies of the breastfeeding experience (Maclean, 1989b, 1990; Dyball, 1992). Others have restricted themselves to a particular setting, such as hospital postnatal wards (Cloherty et al., 2003; Gill, 2001; Dykes, 2004, 2005a, b). Yet others have chosen a particular facet of breastfeeding to investigate: for example, the let-down reflex (Britton, 1997, 1998), or expressing (Morse & Harrison, 1988)

Disciplinary barriers can be frustrating and may hamper the progression of understanding. Often researchers do not reference works from other disciplines, even when highly relevant⁴⁵. This may partly result from search strategies, including choice of data-bases and terms. These, in turn, may rest on assumptions from within the discipline: anthropologists may not search

⁴³ This list does not claim to be exhaustive, either in terms of discipline or in terms of studies.

⁴⁴ Of course, if quantitative approaches are included the list of disciplines becomes much longer.

⁴⁵ I am aware that I may be giving a hostage to fortune with this statement!

nursing databases; UK midwives may not thoroughly search the international literature; searching for 'breastfeeding' yields different results from 'breast milk'⁴⁶.

Van Esterik (1997, 2002) called for integration of results of studies conducted merely within the different sub-fields of anthropology. Extending this across wider disciplines will prove a task of some complexity, but has the potential to yield deeper insights (Walsh & Downe, 2005). In conducting this study I have come to appreciate the difficulties inherent in such a project. However, in surveying the quantity of research which has been done and literature generated, such meta-synthesis which has the potential to yield insights of greater depth is, I suggest, now an important task for understanding in this area. A number of reviews of quantitative data have been conducted (Renfrew et al., 2000; Sikorski et al., 2002; Renfrew et al., 2005). In chapter 11, I will suggest how the data I collected resonates with the theoretical understanding of breastfeeding as a liminal, transitional phase of life, and I examine a wide range of qualitative research to construct and support my argument. This does not aspire to be a totally comprehensive review, but stands as an attempt at making use of existing literature. I have experienced much frustration at reading the work of others and noticing when highly relevant similar, or contradictory, findings have not been discussed.

Conclusion

Weight monitoring of well babies is a well-established practice, embedded in the expectations of mothers and health workers in the UK. Women take their babies to clinics for weighing frequently as part of their pattern of good mothering, and the recorded weight gain influences their understanding of breastfeeding efficacy. However, the accuracy of weighing practice, and the suitability of the charts on which weight is currently plotted, combined with questions as to how best to interpret a weight gain pattern or a single weight as of sufficient concern to require intervention, and a paucity of information of how best to intervene mean that a number of controversies and questions surround this. For breastfeeding women weighing may seem to represent absolute scientific measurement of breastfeeding adequacy, but interpretation requires skill and judgement. In particular, slight weight deficits may be less of an assault on long-term health than early supplements or breastfeeding cessation. Breastfeeding-centred interventions to influence weight gain have not been well researched and breastfeeding management techniques have not been uniformly taught to UK health visitors, and women may be completely unaware that changes in breastfeeding can influence weight gain. Thus use of

⁴⁶ For example, a paper by Dykes (2002), based on the same data as Dykes and Williams (1999) is more rarely cited – this may be because 'breast milk' and not 'breastfeeding' is used in the title. Creativity in search terms is a subject not addressed in literature I have read.

supplements, although also poorly researched, remains a common response when a baby's weight is of concern.

Having explored the literature, I turn to the theoretical assumptions underpinning my study, and the methodology I employed in chapter 3. In chapter 4, I describe how I conducted the research, with my analysis of results in the following chapters.

Chapter 3: METHODS AND UNDERLYING APPROACH

“For a better comprehension of the breastfeeding experience and the interplay of the influencing factors, the dynamic nature of the practice must be acknowledged. It is an activity that takes place many times each day, every day, over many months. Thorough understanding of it demands prospective studies conducted in a way that captures its changing patterns” (Maclean, 1989a, p358).

In this chapter I discuss the ontological and epistemological underpinnings and theoretical perspectives of my study. In doing this I hope to allow readers to accompany me on the journey through my study so that the decisions I made as I conducted the research are clear and can be used in considering my results.

Qualitative research is concerned with “how the social world is interpreted, understood, experienced or produced” and focuses on building understandings of “complexity, detail and context” (Mason, 1996, p4), by looking at a situation or “foreshadowed problem” (Hammersley & Atkinson, 1983, p28) in a holistic, yet systematic, way. Qualitative studies aim to describe natural settings – that is, ones that occur, rather than experimental interactions, designed for the research. This exploration is expected to illuminate the underlying dynamics of interactions within the setting. Qualitative researchers seek to “place complexity at the centre of their research”, and “by focussing upon the mundane detail of what is going on in a setting, [...] are in a position to challenge routine, but unexamined, assumptions about familiar social settings” (Murphy et al., 1998, p5).

Oakley (2000) queries the validity and utility of conceiving of qualitative and quantitative study as opposing and separate means of conducting social science. In this study, I have attempted to account for breastfeeding as a biological as well as a socially and psychologically shaped experience. I assert that only by attending to findings on the physiology of breastfeeding and growth as well as to women’s accounts of their experience can a sensitive and multi-layered understanding be achieved. This I see as crucial if there are to be improvements in the experience of breastfeeding (and, in this case, its intersection with weight monitoring) for women (and babies).

Explicit attention to the underpinning assumptions of an author’s approach can provide useful tools for evaluating a research study in its own right, and for understanding it in relation to other research which studies the same or similar issues. I present my approaches here.

Ontology, Epistemology, Theoretical Standpoint, Methodology and Methods

Mason (1996) and Crotty (1998) urge researchers to grapple with questions of ontology, epistemology, and theoretical standpoint which underlie the methodology and methods of their work. Crotty (1998) provides a hierarchy in which epistemology and ontology provide the basis of how one understands the world, with the theoretical standpoint taken in any study resting on this foundation. A methodology is chosen which resonates with these, with the methods chosen to pragmatically address issues of interest. I have chosen to use Crotty's typology as it offers clarity in an area in which terminology is confusing and different authors may present a method, such as participant observation, as a methodology (Crotty, 1998; Murphy et al., 1998; Savage, 2000b).

Murphy et al. (1998) point out that there have been 400 years of debate on issues of ontology and epistemology so it is unlikely that a researcher will produce wholly new approach: however Crotty (1998) asserts "In a very real sense every piece of research is unique and calls for a unique methodology. We, as the researcher, have to develop it" (p14). In engaging in this study, I have experienced a development in my own understanding of what I think I know and how I know it, at the same time as actually devising the methodological approach to capturing information and the methods I used. This was a cyclical process, much like the process of ethnography itself (Spradley, 1980). I also found myself grappling with issues rather than learning about them in a smooth progression; which has at times seemed to take my attention away from more immediate concerns of conducting the practical side of the research, yet at other times, it has seemed necessary to revisit these issues in order to make sense of the practical conduct of the study (Edwards & Ribbens, 1998).

Ontology is defined as the study of being, of the nature of existence (Crotty, 1998); the ontological question Mason (1996, p11) urges a researcher to ask is "what is the nature of the phenomenon or entities, or social 'reality', which I wish to investigate?" Epistemology is the theory of knowledge or the *evidence* of the subject of investigation (Mason, 1996); issues of ontology and epistemology are linked and "tend to emerge together" (Crotty 1998, p10).

I identify my understanding to be constructionist, in that I believe the meaning of things to be constructed by human beings "as they engage with the world they interpret" (Crotty, 1998, p43). This is thus distinct from objectivism, which holds that there is an independent reality, absolutely knowable through certain forms of enquiry, and subjectivism which is concerned with meaning which is created by the individual. Constructionism "brings objectivity and subjectivity together, and holds them together" (Crotty, 1998, p44). Social research conducted

with this understanding investigates individuals and collections of individuals who are born and find their way through the world of cultural meanings, constructing personal meanings and acting on them. Individuals are seen in relation to their culture – not as beings determined solely by that culture, but as people whose actions are in tune with culture, and whose rebellions or deliberate choices to reject aspects of that culture are still informed by the culture they have imbibed from childhood (with their mother’s milk, as one might say).

Theoretical Perspectives

Theoretical perspectives are defined as the philosophic stance or assumptions underlying the approach to deciding what kinds of questions are important to research and what kinds of data constitute answers (Mason, 1996; Crotty, 1998, Murphy et al., 1998). As Crotty (1998) describes, I approached my study by thinking about the “concrete techniques” (p6) I planned to use, and strategies for conducting the study, that is my methods and methodology. I experienced the process of elucidating the framework I used as something of a process of discovering what assumptions I had already brought to bear on my understanding of social life, rather than selecting of a way of thinking, or, as Wolcott (2000) calls it in the title of his book, a “way of seeing” to be applied to the conduct of the research. This investigation of assumptions, while difficult, and at times appearing to stand in the way of ‘just getting on with it’, ultimately gave me richer insights into my study.

Symbolic Interactionism

Ethnography concerns itself with how individual action relates to community norms, or culture, through the interactions of individuals and their understanding and use of shared symbols (Crotty, 1998). Mead (1967) describes it as focussing on “the patterned ways in which men [sic] have built upon their common biological inheritance different and challenging human cultures” (p7). Culture provides a complex set of meaningful symbols (Spradley, 1980), which include language (Mason, 1996), and guidelines, implicit or explicit, which guide individuals in how to view the world and behave in it (Helman, 2000). Ethnographic investigation uses observation of individuals during their everyday and ceremonial interactions to investigate their wider culture. While the actions of the small group studied cannot straightforwardly be taken as representative of the complete society, the individual issues thrown into relief through careful description help to illuminate the wider whole (Hammersley & Atkinson, 1983; Murphy et al., 1998)

Crotty (1998) asserts that this type of enquiry rests on “the notion of being able to put ourselves in the place of others” (p8). While this is by no means an unproblematic exercise, this seemed to fit with both my own experience of being and with my understanding of the study. I had developed ways of interacting with breastfeeding women, through years as a breastfeeding supporter, in which I offered my experience of breastfeeding and my own embodied understanding (mediated by training) in helping others. The development of empathy for women’s situations was central to this way of working. Although my approach during fieldwork was different, the focus on a shared production of what was important coincided with my previous understanding of finding out about breastfeeding. The centrality of interaction also chimed with the nature of breastfeeding as an activity not of an individual woman (although it is mostly considered in this way), but of an entwined mother and child dyad. As the physical success of breastfeeding rests on the suckling baby as much as the responding mother, placing interaction at the centre of my study seems fitting.

To a novice researcher, the theoretical perspectives on offer can often seem bewildering and the temptation is, rather as in choosing ice cream, to heap a scoop of another ‘flavour’ on top. Two perspectives which tempted me, and elements of which have influenced me, are critical enquiry and feminism⁴⁷.

Critical Enquiry

Critical enquiry is derived from Marxist focus on forces of production and social relations derived from them (Crotty 1998). It investigates “historically situated structures” which may appear to individuals as “confining as if they were real” (Guba & Lincoln, 1994, p111). As can be seen in my literature review, I find the history of weighing of relevance and importance in the understanding of what I saw in the clinic⁴⁸. As will become evident in this thesis, I find the economic conditions of production highly relevant for the social practices and personal experiences of breastfeeding. The focus within critical enquiry on critiquing and transforming practice appeared at times to fit my approach – as this thesis will make clear, I have reservations about current weight monitoring practice. However, in studying Guba and Lincoln’s (1994) typology, I find that I ultimately identify my first aim as the urge to explain and understand interactions and meanings.

⁴⁷ Perhaps it would be more honest to say that, in reading about these, I have recognised elements of my own approach and wondered if my study would be better described that way.

⁴⁸ This may also be due to the fact that my first degree was in modern history. I obtained this (in 1980) from King’s College, Cambridge: King’s has a long-standing reputation for producing Marxist historical scholarship.

Feminism

This research has not been undertaken as a feminist project per se, but it is underpinned by my own feminist values, and informed by debates about feminism and breastfeeding. Feminism has shaped my personal and social understandings, and I identify myself as a feminist. For me, in the context of breastfeeding, this involves an analysis of history to understand how we got to the current state of cultural understanding of breastfeeding, with particular attention to the marginalisation of women. In particular the relationships between women and their babies is one I assert should be of importance to all, while acknowledging that this rarely has been central to those who have social power. The embodied activity of women and infants has been marginal, pushed to the edge, and to bring it to centre stage is to challenge cultural values.

I do not assert that breastfeeding can be categorised as one kind of (positive) experience for all women. Women acting in what they consider the best interests of themselves and their children, and balancing these as best they can, may rationally choose not to breastfeed or to limit breastfeeding (Maher, 1992a, b; Palmer, 1993; Blum, 1999). Indeed, breastfeeding has at times been presented as something women must do to serve their babies, just as it has been understood as something they must not do since it interferes with their waged work, socialising or pursuing sexual partnerships. However, the pervasive understanding through recorded time and over the globe that women are likely to experience difficulty in producing enough milk to adequately nourish their babies is surely an issue which should be of interest to feminists, as it is a clear instance of the way patriarchal social relationships have shaped history and culture

Feminism is not a unified philosophical or pragmatic stance, and many strands have been identified within it, often with different attitudes to different aspects of breastfeeding (van Esterik, 1989; Dyball, 1992). Breastfeeding has offered challenges for many feminists in many different ways. Discussions of women as mothers have sometimes conflated childbearing and postnatal nurture at the breast (Hausman, 2003), with fewer considering breastfeeding in its own right. Western understanding of the embodied individual includes an expectation of a certain autonomy and “breastfeeding represents a radical, alternative form of embodied subjectivity” (Hausman, 2004). Indeed, one feature of our general failure to organise our understanding of life to account for breastfeeding is that our culture lacks ways of characterising the dyadic nature of the breastfeeding relationship. Another aspect is that breastfeeding is a set of behaviours. Pregnancy occupies a distinct time span and while the mother may feel herself to be ‘two-in-one’ she is still able to act with individual agency; breastfeeding can last for years, with the pattern of intensity varying during this time for the

same mother-baby pair. Differing phases of breastfeeding imply different parameters on the amount of necessary contact and different levels of separation into two linked individuals.

Feminists who have focussed on achieving equality status with men, both at an ontological level and at the level of social policy, may have difficulty with whole-heartedly advocating breastfeeding, for fear of sliding into biological 'essentialism' (Carter, 1996; Blum, 1999). Hausman (2003) has critiqued such theorists and characterised their understanding as flawed in that it involves a rejection of the evidence on the biological difference between breastfeeding and other forms of infant feeding. I agree with Hausman that accepting the biological evidence does not equate to an insistence that women provide milk from their bodies for their infants, but it is an important facet of breastfeeding and to deny the reality that not breastfeeding leads to poorer life-long health outcomes is perverse.

Van Esterik (1989) brings together a feminist sensitivity to the material conditions which shape women's lives and often make it hard, or disadvantageous, to choose breastfeeding and to continue to choose its practice on a daily basis, through a variety of changing circumstances. She accepts the label of 'advocate', and argues that this does not undermine her contribution to understandings (van Esterik, 1989, 1997). Hausman (2003) and Dykes (2004) also straddle the different 'knowledges' about breastfeeding: women's experiences and understandings in different cultural and socio-economic circumstances and biological epidemiological population observations of the effects of breastfeeding. I identify myself with this approach.

I find it of particular interest that 'speaking for the baby', as mother-support groups, such as La Leche League [LLL], have done (Hausman, 2003) has become understood to belong to an essentialist, a-feminist tradition (Bobel, 2001). Indeed I associate the strongest public manifestation of speaking for the baby with pro-natalist groups. I suggest this should not go uncontested. My own experience of observing babies when their mothers have been helped to improve physical breastfeeding technique, and in listening to my children talk about breastfeeding⁴⁹, has led me to question my culturally acquired assumptions that having a mother who is happy with her feeding choice is necessarily what babies would also choose. This begins to sound similar to statements from 150 years ago asserting that men knew best to decide what was in women's best interests. Kahn (1989) has challenged us to "include the infant as a speaking voice" in our understanding of breastfeeding (p28). Through psychological research and investigation of the physiology of infant development, we are offered clues as to what babies would like (Gerhardt, 2004). At the same time, individual characteristics of the

⁴⁹ My daughter can remember being a breastfeeding child: obviously her articulation is subject to the difficulties of recall.

baby may be as important in determining the physical success of breastfeeding as individual characteristics of the mother (Lothian, 1995). I attempt to take account of these and to truly accept the implications that breastfeeding involves inter-subjectivity of two individuals, the mother and baby. It is my hope that this will become part of new feminist attempts to balance and combine the “disparate discourses” around breastfeeding (Bartlett & Giles, 2004).

In terms of this thesis, I have attempted to understand the purpose of other researchers as well as their theoretical orientation. Many frame their work in terms of improving the population indicators of breastfeeding initiation, intensity and duration. I am not uninterested in these, but I assert my primary interest to be in examining one facet of this complex and important human activity in order to enrich our understanding of ourselves as people.

Methodology and Methods

I chose to conduct an ethnographic study. This methodology derives from anthropology⁵⁰, in which a researcher locates him/herself in a different culture, living there for a period of time, observes people’s interactions, and asks questions to develop a better understanding – so it involves not solely observation, but interaction with the people present (Wolcott, 2000). An ethnographic study is a more modest endeavour, which involves a focused set of observations of and interactions with, a place which is expected to be of importance to the study of a pre-selected topic of interest and is conducted by practitioners from a variety of disciplines, including education and nursing (Boyle, 1994; Hammersley & Atkinson, 1995).

Boyle (1994, p162) lists characteristics which pertain to ethnographies: holistic and contextualised, reflexive, mix insider and outsider (or participant and researcher) perspectives. They also result in a written ethnographic description. I will briefly discuss each of these features and then consider them in terms of my own study.

Holism and contextualisation are achieved for Boyle (1994) through participant observation or going to experience for oneself what happens rather than relying simply on what people say is happening. The emphasis should be on experiencing rather than just watching (Wolcott, 2000) This does not imply suspicion that research participants are lying, but seeks to discover things so taken for granted that they may never be voiced (Johnson, 1995). It gives opportunities to compare what people do as well as how they talk about what they do. The aim is not to oppose observational and interview data, or to assert that what is seen is more straightforwardly

⁵⁰ Anthropologists have made substantial contributions to the understanding of the experience of breastfeeding, both globally and within developed country contexts.

understood than what is heard, but to use them both to construct a picture of the context and relationships in which they both occur (Atkinson & Coffey, 2002).

Reflexivity, or accounting for the influence of the presence of the researcher, is central to the process of doing ethnography (Hammersley & Atkinson, 1983). Rather than trying to eliminate the effects of having the researcher present, the data are viewed as a product of what the other participants do when the researcher is there, what accounts they may give of their actions to the researcher, and the researchers' own reflexive observations about the scene (Hammersley & Atkinson, 1983). As I felt the need to account not just for my personal impact on the study, but also on the implications of research conducted by a breastfeeding support volunteer, the centrality of reflexivity to method was a support rather than a burden.

While aiming to produce an account using "native language" (Spradley, 1979, p17) the researcher should combine both her/his perspectives and that of people who are researched (Hammersley & Atkinson, 1983; Boyle, 1994; Savage, 2000b). Both the perspectives of those researched and the perspective attained by the researcher should be present in the final analysis. Pragmatically, as women may attend clinic because 'that is what you do', my presence in asking about this taken-for-granted activity could spark articulations or self-analysis that might otherwise remain unvoiced or not take place. Thus the material I obtained in this study appeared likely to be a result of the interaction of the researcher and the researched.

Production of a written descriptive ethnographic account of the research setting is held to be the final characteristic of ethnography. Indeed the term itself can confusingly be applied to such an account or to the methodology of a research study (Hammersley & Atkinson, 1983). In this, care may be taken to present the findings in an interesting and engaging way, while remaining true to the data.

Participant Observation and Interviews

Participant observation has sometimes been described as synonymous with ethnography (Hammersley & Atkinson, 1983), although it is better understood as a method or technique of data collection rather than a methodology (Crotty, 1998). Dilemmas of how much the researcher will participate and how much to observe need to be addressed at the design stage of the study and will need to be re-addressed throughout the period of data collection; actual

unforeseen events in the fieldwork will also shape this through decisions made on the spot⁵¹. Ethnographers “must strenuously avoid feeling at home” (Hammersley & Atkinson, 1983, p102) yet must become increasingly proficient in the “native language”, and continually work to maintain rapport with participants (Spradley, 1979, p24).

Savage (2000a) views the generation of knowledge in participant observation as relying not just on seeing, but through all the senses. The embodied memory and the lived body of the researcher is important to consider in the process of participating and observing. This is echoed by Wolcott’s (2000) description of the researcher *experiencing* the scene and Janesick’s (1998) comparison of fieldwork technique with dancer’s exercises. Savage (2000a) is concerned with habits of nursing care, but the influence of embodied memory seemed to have particular resonance in a study where I was observing not only the act of breastfeeding, in which I had previously engaged, but any physical interactions involved in helping women with the skills of breastfeeding management. Indeed, as women often interrupted interviews to breastfeed or attend to their babies, I could not avoid the physicality of the focus of the study even in the ‘interview’ part of the study⁵².

Participant observation sets the stage for other techniques such as interviews (Boyle, 1994). Interviews aim to deepen the analysis, by allowing a progressively closer focus on areas of interest, so that an ethnographic study can help explain and contribute to theory, as well as describe. Observation and initial interviews can help identify questions that are meaningful for the people being studied (Spradley, 1979). It may be assumed that the sort of questions asked by an ethnographer must always be open-ended, or unstructured, but interviews can include different types of questions and an ethnographer could choose to ask quantitative or closed questions. Hammersley & Atkinson (1983) emphasise that interviewing should be reflexive and the interviewer should bring a list of topics to address, rather than a list of set questions, vary the type of question to elicit different types of information, and use skills of active listening: as Charmaz (2002) remarks, “interviewer and subject co-construct the interview” (p678). Spradley (1979) stresses the importance of a commitment to creating rapport and being non-judgemental. These approaches accord with the approach of breastfeeding support volunteers, as I describe in a section, below.

⁵¹ As, for example, in some incidents I describe in chapter 4, in which I participated in weighing babies in ways I had not expected.

⁵² I have not come across many descriptions of how women who have young babies behave in interviews, although Oakley (1981) pointed out that such interviews would involve issues such as these.

Validity and Guarantee of Value

The measures of reliability and rigour used in quantitative research are not easily transferable to qualitative methods, and debate has ranged as to how to measure 'rigour and reliability' – and if such concepts are even valid for qualitative research (Mays & Pope, 1995; Murphy et al., 1998; Mays & Pope, 2000; Silverman, 2000; Barbour, 2001). While measured in different ways, it is important to show that research has been conducted with integrity, and how it advances knowledge as it claims to.

Integrity of research means more than that the researcher did not falsify data, but used it honestly, so that one voice or story is not privileged, and all of the data are accounted for in presentation and theory (Silverman, 2000). Honesty about the personal biases of the researcher, and demonstrating that the methods used and the conduct of the study were appropriate through good reporting, are ways in which to demonstrate integrity. Guarantee of value covers issues to do with the appropriateness of the method and conduct of the research to illuminate the questions being asked.

I attended to these issues throughout this study, as Mason (1996) urges. In chapter 4 I describe how I conducted the study and how I gathered and analysed the data, so that readers can follow my 'audit trail' (Murphy, 1998). Several techniques have been proposed as helping to ensure the validity of qualitative studies. Triangulation, or using several methods, is suggested by Silverman (2000). I used two methods in the two phases of my study. I conceived of this as something of a 'progression', using interviews to enquire more deeply about issues identified during observations, however, some new issues were discovered. The two-phase structure offered some opportunities for coming at the same concept from different angles, however, I would hesitate to claim this 'verified' my data through triangulation; more that it allowed different viewpoints on questions I found of interest (Murphy, 1998; Mays & Pope, 2000; Silverman, 2000; Barbour, 2001).

Asking respondents to validate the analysis is another suggestion (Mays & Pope, 1995; Mason, 1996). To attempt this systematically, when opportunistically observing encounters in the clinic would have been difficult, and probably would have involved privileging some participants⁵³. I saw some women more than once, and often we built on previous conversations. In phase two, where I interviewed women more than once in their own homes, it was natural to refer back, and occasionally I would check a previous impression or ask for

⁵³ These would have been women who attended frequently, women who came regularly to the breastfeeding group, and the health visitors. While each of these were important voices in my study and my data, the women who did not come regularly were of interest as offering something of a 'discrepant' point of view.

more reflection on an issue. Some participants indicated that my previous visit had got them thinking more deeply about some of the issues we had covered, and they may have offered richer reflections at subsequent interviews⁵⁴.

Involving others in coding data, as a measure of quality control, was not attempted. This was partly for pragmatic reasons, but also to preserve the “richness and creativity” which Morse (1997, p 446) argues researchers gain from direct contact with study participants. I presented my findings at seminars – something which might elicit affirmation from audiences (Mays & Pope, 1995). However, in presenting, I often received mixed reactions. The practice of weight monitoring is enshrined in custom and is central to the daily activity of health visitors. Certain criticisms (for example, of the charts used) are permitted and welcome, others less so, particularly by someone outside the profession. At times, when I referred to weighing as a ritual, which I intend in the anthropological sense of a meaningful, patterned interaction (Douglas, 1984), health visitors assumed this was simply a negative label.

A search for discrepant cases can help to ensure that a study is not biased to one interpretation (Mason, 1996; Murphy et al., 1998, Silverman, 2000; Barbour, 2001). This raises the question: discrepant in what way? In phase two of this study, three of the women I interviewed did not attend the clinic regularly to weigh their babies. This offered an alternative viewpoint from the women in phase one, all of whom I met at the clinic. These women also shared many attitudes with the rest of the respondents. Could I have found more variation had I searched for a different type of discrepancy? I can only assert that I could not identify another one to search for.

In the course of the study, my own preconceptions were challenged and the core concepts which I explore in this thesis were ones which arose from my observations⁵⁵, I thus assert integrity in my thought process⁵⁶. In the next chapter I present a detailed, open account of how I undertook the research, so that a reader can evaluate my decisions. I also explore my own impact on the study (Koch, 1998; Ahern, 1999).

Conclusion

⁵⁴ This is an instance of how the data generated in a study like this is the product of the interaction of the researcher and the researched.

⁵⁵ I found the observations more fruitful in presenting new concepts to me, which could be due to the method, or to the fact that these preceded interviews.

⁵⁶ This is also in line with the grounded theory approach I used to handle and analyse my data. This is discussed in a following section.

In this chapter I have described my position with respect to methodological and ontological issues. My approach highlights the interactions between breastfeeding women and health visitors. I seek to investigate how understandings of the importance of weighing for infant health were created in clinic encounters. I have located myself with respect to the feminist debates within breastfeeding research, clearly claiming a position as a breastfeeding advocate, in an anthropological tradition, which I claim can offer useful tools in understanding the way breastfeeding women make their daily decisions about feeding their babies.

In the next chapter, I describe how I conducted the study. The approach I took rests on the underpinning assumptions I have presented in this chapter, and my account is presented so that a judgement can be made about the consistency between my theory, actions and analysis.

Chapter 4: CONDUCTING THE STUDY

“Field work is a very difficult thing to do [...] In the field one can take nothing for granted. For as soon as one does, one cannot see what is before one’s eyes as fresh and distinctive” (Mead, 1972, p154).

In this section I describe how I conducted my study, using the methods of participant observation and interviews. Practical issues of negotiating access and gaining consent are detailed. I describe the form my data took, and how I treated and analysed it. I also offer an exploration of the impact of myself on the generation of the data throughout the study.

Participant Observation in a Child Health Clinic: Access

My study involved two phases of fieldwork. In phase one, I conducted participant observations in a child health clinic, with short interviews with breastfeeding women, and longer interviews with health visitors. In the second phase I recruited 14 women and interviewed them several times. Data from phase one was analysed before proceeding with recruitment for phase two⁵⁷, allowing me to identify issues of interest which I could explore more thoroughly in this phase, and allowing my understanding of what each woman told me to develop through several contacts (see Charmaz, 2002).

I selected the clinic on pragmatic grounds. These included relative distance to allow realistic travelling times; its location in a geographical area with higher than average breastfeeding rates for the Health Authority (now Primary Care Trust), and in an area where I have not established a profile as a volunteer. The Breastfeeding Network, the organisation I work for as a volunteer, has a national telephone number, and can divert phone calls from a particular phone code to specified volunteers (Broadfoot et al., 1999). I requested that calls from the area surrounding the clinic⁵⁸ be routed to colleagues, reducing the likelihood of any woman in the area of study contacting me in my volunteer capacity (and none did).

The breastfeeding initiation rate in the local hospital (where most of the women in both phases of the study gave birth) is 54%, with about 45% of women breastfeeding on hospital discharge (personal communication from hospital midwife). In the north of England, 61% of women initiated breastfeeding in 2000 (Hamlyn et al., 2002, p23): nationally, 84% of those starting continued past the first week. Thus, initiation in this area is below the regional average, with

⁵⁷ My diagram of codes generated during analysis of phase one data is in appendix 2.

⁵⁸ In practice this included a wider area, as the system works on the basis of telephone codes.

'fall off' in the first week at roughly the national rate. The health visitors in this clinic were unable to say what percentage of mothers were breastfeeding at the first health visitor visit, but they confirmed that this, or one neighbouring area⁵⁹, were most likely to have a fair number of breastfeeding women.

The clinic is run by the local Health Authority, and serves any woman who chooses to come. This is contrast to many clinics that are 'attached' to GP practices and intended solely for patients of that practice, although the same health visitors may conduct the sessions. This system is designed to maximise the likelihood that women coming to clinic will see 'their' health visitor in the GP clinic. Four health visitors attended the clinic I chose, and their office is located in the same premises, and I was invited in the office which allowed me to informally discuss events observed after clinic sessions.

At my initial approach, I discovered that the only breastfeeding support group in the Authority (at the time) was run at this clinic, so I included observations of this in the study design. Health visitors in all parts of the Authority recommended this group to women. There was little overlap, in fact, between women I saw coming for routine clinic visits and those coming to the group, despite these taking place in the same room. The two different sessions thus provided two opportunities to observe breastfeeding women in this area.

Target Group

Initially I specified that I would seek to interview women who were English-speaking and white. Facilities for translation would have added costs to the study, and the feeding patterns of women from different ethnic groups may vary (Thomas and Avery, 1997; Condon et al., 2003). First-time mothers were sought, as previous feeding experience might influence behaviour with this baby.

A few months into the study I identified problems in recruiting the expected numbers. This area had the high breastfeeding initiation rates for the Authority, but many of the women coming to clinic, and even the breastfeeding group, had either never started or had already stopped breastfeeding when I first saw them. The low rates in general in this locality may explain this. In August, 2001, I wrote to the Local Research Ethics Committee (LREC) to ask if I could include second-time mothers, and received consent by return. I was thus able to increase the potential number of participants. This also allowed interactions in the

⁵⁹ Some of the women recruited in phase two came from this area, which was served by another clinic.

breastfeeding group, where second-time mothers were often present, to be included in field notes. One mother encountered had had twins in her second pregnancy: as she attended the breastfeeding support group she was included in the study so that interactions which included her comments could be recorded but issues specific to twins were not included in the analysis. No woman who was not white or English speaking was encountered in any clinic session.

Ethics

Before applying to the Local Research Ethics Committee (LREC) for ethical approval for the study, I approached the Nurse Manager of the Health Authority, who agreed to my conducting the study, subject to the approval of the LREC and the health visitors. In November 2000 I visited the clinic and spoke to the health visitors. They signalled their initial willingness to take part, and I received formal permission from the Nurse Manager in December 2000.

Having submitted documentation in February, 2001, final written approval from the LREC was given in March 2001 after minor adjustments. In my draft information sheet I had included a line stating that the LREC had given approval to the study. This LREC's policy was not to allow such an inclusion, so I removed this. The other aspect the LREC stressed was that information should be given to women in advance of my approaching them during clinic sessions. They felt it was important to give potential participants time to reflect on the study before agreeing to take part. I was committed to taking great care in relation to consent. I proposed to meet the LREC request by providing the health visitors at the clinic with information sheets⁶⁰ about the study some weeks before my first observation and asking them to give them out to all women they met at home visits and in clinic who were breastfeeding, in the weeks preceding the study. This was accepted by the LREC.

As I relied on health visitors to give advance information, I cannot be sure this always happened. Indeed, since this clinic was open to anyone in the authority, at times a woman who was breastfeeding from another part of the town would attend. Health visitors routinely asked about feeding method before they weighed a baby, and if I was present, when a woman said she was breastfeeding this triggered them to mention me and the study. If this was a woman who had not heard about the study before, I experienced a tension between offering her time to think about it and saying I would ask her if I saw her again if she was willing to be interviewed and speaking to her on that day. I always offered the first, and some women did take me up on this

⁶⁰ This sheet, and the consent forms for both phases of the study, are in appendix 1.

(and were, in fact, subsequently interviewed) but some mothers said they were prepared to be interviewed there and then and I took the opportunity to do this.

I asked each woman if she was interested in participating, gave her written information⁶¹ and asked her to sign the consent form on the first occasion that I had contact with her. I made it clear that the study was being conducted independently of the clinic and confidentially. During breastfeeding support group sessions I made sure I was introduced (or introduced myself) to each woman I had not met before.

All breastfeeding women I spoke to consented to participate. One woman indicated that she would take part, then during discussion in the clinic revealed that her family situation had recently become very difficult (this was also the first intimation the health visitor had of her circumstances). The discussion with the health visitor (we were the only three adults present) became emotional and I felt it was not ethical to follow up the verbal agreement (made while she was changing the baby's nappy)⁶² with a request to sign the form. I therefore did not include her in the study. Notes I had already made of her comments were not transcribed or used in the data analysis.

In all my fieldnotes and transcriptions, I used code letters for the women and initials for the health visitors. In presenting data throughout this thesis, pseudonyms have been used in place of names; where women referred to their children by name, they too have been given pseudonyms, while I have removed some references to names of women's partners.

When I planned the study I had not entered a baby clinic for over a decade, since I had attended as the mother of a young baby. I did not conduct preliminary observations, as even this would have required ethical approval. Had I been able to do this, I might have anticipated the difficulty of observing first time breastfeeding mothers in isolation from the rest of the baby clinic. The idea of phase one was to observe breastfeeding women who were engaged in interactions about weighing. My time in clinic was often spent watching and listening to mothers who were not breastfeeding, and although these interactions were not what I had come explicitly to observe, they certainly helped me to construct a wider picture of women's experience of the clinic.

⁶¹ If they had seen it before they often had not got the copy with them.

⁶² This was a common reason for a delay of signing the consent form until the middle or end of an interview, although I strove to avoid this. I found balancing the ideal ethical procedure with such practicalities much more complex than indicated in literature on the topic!

When I was observing, women entering the clinic who were not breastfeeding were **not** approached for consent. At slow times I might introduce myself or the health visitor might explain why I was present, but at busy times I could remain an unexplained presence⁶³. I had not identified this dilemma beforehand, nor had it been raised by the ethics committee. Although I might listen attentively to interactions about weighing between non-breastfeeding mothers and health visitors, I was actually often in no more privileged a position to overhear than other mothers waiting in the clinic for their turn, or than people sitting in the GP waiting area. Hammersley and Atkinson (1983) state that ethnography is an extension of everyday observation and Spradley (1980) notes that failure to gain consent to observe people in public contexts does not represent unethical conduct. Notes I made about interactions between health visitors and mothers who were not breastfeeding were general and were used to help with my background understanding⁶⁴.

Fieldwork: Phase One

Fieldwork began in May 2001, and continued until December 2001. I spent 30 hours, over 20 sessions, observing the clinic, during which time I taped seven weighing episodes. I also taped interviews with nine breastfeeding mothers attending the clinic. With others I conducted short interviews with notes. The interviews were generally conducted in a separate room, which was made available to me, thus affording privacy, relative quiet, and perhaps, a sense for the women that they could speak more freely. A few interviews were conducted in the clinic room itself, when no other mothers were waiting to be seen, and the health visitor was in the office. One interview was conducted in a corridor, when no room was available. In addition to the noise and sense of being in a semi-public place which I felt affected this interview, it turned out that my tape recorder had malfunctioned and the tape sounded like ‘gabbling’. I realised this on the same morning and immediately noted all the phrases I could remember from this interview. One effect of this experience was that I took great care in future to check batteries and replace them regularly!

I interviewed all four health visitors who worked in this clinic, during November and December 2001. I had had opportunities to speak to each of them during quiet moments in clinic sessions, and in the office. The one-to-one interview, however, allowed an unhurried chance for discussion and also taping. These interviews were arranged in advance, and lasted from

⁶³ I did wear a badge, but this merely stated ‘visitor’.

⁶⁴ And were invaluable for this. I would certainly argue that research on breastfeeding women is impoverished when their interactions with mothers who are not breastfeeding are not considered. My observational experience emphasised the context of UK clinics in which breastfeeding is not the norm.

between 45 to 90 minutes. I used the study objectives as prompts for discussion. I thus obtained a variety of 'viewpoints' on the issues of interest.

Breastfeeding Group

Before I attended a breastfeeding group session, the health visitor who usually conducted the group (Liz) took my information sheet in to several sessions. She reported that not only did women read these, but discussed the study⁶⁵. All mothers expressed willingness for me to attend. At each session, I ensured that any woman I had not met before had heard about the study and was willing for me to be there. No one voiced a reservation about me attending or taking notes on the sessions.

I observed 14 breastfeeding support sessions. These were scheduled to be one hour each, but usually over-ran. In all I saw 17 women in breastfeeding group sessions. I saw two of these women once each in clinic as well. Three women in the breastfeeding group sessions had already stopped breastfeeding at the time I first met them. Due to the difficulties of noise level in the breastfeeding group, (with up to six mothers and babies, the health visitor and me, in a small room) interviews⁶⁶ there were not taped. Interactions between mothers and health visitors, or mother to mother in the group were noted. Due to the informal group structure, I was involved in conversations and was able to ask for some clarification on issues being discussed, but I sought not to steer the conversations. On one occasion the group started with only one mother and I asked to tape an interview. After a while another mother entered, who consented to the taping continuing, and I captured the whole session on tape.

One mother who had attended the group since before I arrived, and who gave her consent to participate in the study, appeared to manage to sit well away from me and also to avoid my eye. It also became clear during the first few sessions that she was experiencing problems with breastfeeding and she soon stopped altogether. Her baby was suffering from 'reflux' or frequent vomiting of milk, with an associated weight gain that concerned her. I did approach her a few times and attempted to start a conversation, but she shied away from this topic. I felt unsure, as a novice researcher, as to how far to attempt to engage her, and also, since we were in the group, uneasy about exposing her to a general discussion.

⁶⁵ Tantalisingly, one mother of a baby already six months expressed disappointment at not being able to take part, but I felt that I could not include her – despite the desire to 'get going' – as I hoped to capture current experiences as much as possible.

⁶⁶ These tended to be more conversations than interviews and could be interrupted by other events or conversations in the group.

While this phase felt like a large commitment when it was taking place, it might be considered to represent only a mini-‘immersion’ in the field, although Murphy et al. (1998) note that prolonged engagement in fieldwork may reduce reactivity. My conclusions do not rest on this phase alone, as I used the analysis from observations to inform phase two interviews.

Fieldwork in Phase Two: Recruitment and Consent

In November 2002, after conducting a preliminary analysis of phase one data, I contacted the health visitors at the clinic to ask them to distribute information on the study to mothers who might be willing to be interviewed for phase two. I aimed to recruit between 12 and 15 women.

I gave each of the health visitors a dozen copies of a letter (see appendix 1) explaining the study and asking the mother to contact me directly, or for her to ask the health visitor to do so on her behalf. This ensured that the mother had time to consider whether she wished to take part, and that she could choose how the initial contact would happen. I requested the health visitors give the letter to any mother who was breastfeeding⁶⁷, and asked if they could do this at the first visit, so that I had the opportunity to meet the mother as soon as possible after her first contact with the health visitor (at 10-14 days after the birth). Up to two further face-to-face interviews were to be sought, at intervals of six-eight weeks, aiming for the third interview to happen at around six months. Interim telephone calls were also to be made, in order to maintain contact, and to allow immediate arrangement of a final interview if the mother had stopped breastfeeding.

Recruitment began slowly. Every few weeks I reminded the health visitors about the study, contacting each of them individually, rather than relying on messages. I supplied further copies of the letter as needed. I received feedback that the health visitors found it difficult to discuss the study with women, as the initial visit is already full of tasks: imparting information on accessing services, weighing and measuring the baby, completing paperwork and answering women’s questions. I emphasised that I would prefer early contact, but if a woman with an older baby was interested in participating, I would include her. I thus conducted first interviews with some of the participants when their babies were several months old – some of these mentioned that they had heard of the study earlier, but had not responded due to being very busy in the first weeks of motherhood. It was notable that I learned of three willing participants (all first time mothers) who had heard about the study at initial visits, in the same

⁶⁷ One health visitor sought clarification that the letter was for mothers breastfeeding at all, rather than mothers who were exclusively breastfeeding – she felt that if I held to the latter criterion, I would not be able to recruit many women. I had always intended not to restrict the study to women who were exclusively breastfeeding as one of my explicit aims was to understand the role weighing might play in decisions to supplement breastfeeding.

week, from a student health visitor, and was able to interview all three at an early stage. It seemed her enthusiasm was infectious.

When I spoke to the health visitors I emphasised my interest in including women who might not attend the clinic regularly for weighing. The inclusion of discrepant cases can help to provide richness in the data and depth in analysis (Mays & Pope, 1995; Silverman, 2000). Although it is obviously difficult to judge prospectively, this request meant that one health visitor passed my letter to a mother expecting her second baby who had declared her intention of avoiding routine weighing, and this mother did agree to participate. Two other women in the study seldom attended the clinic; neither had expressed this intention before-hand, so their recruitment was serendipitous.

After some months, in order to speed recruitment, I phoned health visitors in the neighbouring clinic, and asked if they would distribute my letter. I had given a presentation to the health visitor's group, so my study was familiar to them; they agreed to help. In the end, I recruited 14 women, but my reliance on others to make contact felt like a definite handicap⁶⁸!

Half of the women who consented to take part in phase two were first time mothers. Two of the women, who had mentioned having an older child, disclosed, one at the first interview, the other at the third interview, that they had had another child who had died soon after birth, one as her first baby, the other in-between her first and current baby. Interestingly, on the topic of main focus, weighing the baby, one of these mothers attached great importance to regular weekly weighing, while the other was one of the three women in phase two who hardly had their baby weighed at all. The remaining five women were second-time mothers.

Once I had had the initial interview, I maintained contact by telephone. Although it was anticipated that these calls might turn into 'mini interviews', this did not happen (I often seemed to phone just when the baby needed attention, or the mother was about to step into the shower); they were an opportunity to remind women that I was interested in their progress and would be contacting them for a further interview. Savage (2000a) notes that informed consent needs to be regularly reconfirmed; when contacting women to negotiate the time of the next interview I always asked if they were still willing to take part. The calls also allowed me to know when mothers had stopped breastfeeding or were on the verge of stopping, and to arrange immediate interviews. All mothers who stopped breastfeeding before six months agreed to an

⁶⁸ Of course, I am unable to guarantee that health visitors did not select women to approach on the basis of some kind of assumptions as to who would make good respondents.

interview around the time of complete weaning, allowing exploration of this decision close to the time it happened. All of the other mothers consented to further interviews when requested.

I did not lose contact with any of the 14 women I interviewed initially, although this is reported as an issue in some studies (Oakley, 1981; Hoddinott, 1998). Some women were interviewed three times, others only twice, either because they had stopped breastfeeding, or were about to do so, by the time of the second interview, or because their baby was older at the time of the first interview and the second contact was at about six months. Altogether 35 interviews were conducted. One mother requested that our interviews not be taped. This resulted in 32 taped interviews, and fieldnotes from three interviews, which were written up as soon as possible afterwards, with some exact phrases noted during the interview. This mother was one of the last ones recruited, and the experience of previous transcription was a definite aid in taking good notes.

I put together a set of questions to use in interviews. I wanted to make sure I covered similar ground with each woman. These were devised at the beginning, with a version for the first and for subsequent interviews. If I was seeing a woman for the second or third time, I would read through the previous interview(s) and add reminders if there were any issues I wanted to revisit. I printed the questions on a sheet of A4 paper, which I then folded in half so that it fit on my lap. I referred to it during interviews, but most topics came up either spontaneously from the mother, or I was naturally led to ask about them by something she said. Copies of the questions are in appendix 3.

Consent and Women Who Declined to Participate

One woman initially indicated she was willing to participate and we arranged an interview. On the morning she phoned me and said that she had changed her mind. The health visitor said that this mother's baby had caused concern with a lack of weight gain. It was frustrating that the very issue I was hoping to illuminate was a barrier! It indicates that this study may not have captured some negative experiences.

Another woman phoned on the morning of the interview to say something had come up and she would contact me again. I phoned her a few days later, and left a message, following this with a note. I did not hear from her and I chose not to ask the health visitor if she knew of any change in circumstances.

Originally it was proposed to use the same consent form for phase two as used in phase one. However, in September 2002, I requested the ethics committee for permission to remove the witness signature from the form. I felt that on home visits it could be awkward to find a witness for the signature, and could involve the woman having to tell a neighbour or partner about her involvement in the study, which could actually decrease confidentiality. The ethics committee consented to this request.

Data: Format and Analysis

Tapes

All requests for taping in phase one were granted, although not all conversations were taped. Interviews with mothers varied in length from 10 to 25 minutes. As indicated several encounters were also taped. In phase two, all interviews, except with one woman, were taped. I transcribed all interview tapes myself, to ensure confidentiality and also to develop an intense familiarity with the data (as noted by Lapadat, 2000). When transcribing, I noted what was said, rather than attempting to produce a faithful record of all pauses or when both people spoke at once. My focus was on the content. At times, the use of varying tones of voice and nervous laughter did impress itself on me, and helped alert me to the importance of issues.

Fieldnotes

In clinic observations, the majority of my data was collected in the form of fieldnotes. As I sat in the clinic, I jotted words and phrases in a small notebook which fitted in a 'cargo' pocket in my skirt. If there was a pause with no women in the clinic I would write more fully. Just as health visitors have little control over the flow of the work, I felt tense about losing chances to capture utterances and events, and could end up scribbling away throughout encounters at busy times. Even in a short session, it was impossible to record everything I had seen, so these records represent the earliest part of focussing on the events of interest to me (Wolfinger, 2002). After sessions, I might be found parked at points along the route home writing down phrases I had remembered. I wrote up notes from sessions as soon as possible, aiming for this to be the same day. Care was taken to distinguish between notes of conversation and times when I was able to write exact remarks. Some notes were made about women who were not breastfeeding, to establish the general process of encounters.

When I wrote up my notes, I set my page out with columns, so that in addition to a record of encounters and exact remarks, I could record initial ideas for codes, so that my impressions of

what was important were kept fresh. This meant that the process of analysing and coding and early theoretical thinking took place through the course of the study (Wolfinger, 2002). Such notes also provided a place to record my initial response to some events – these could later be explored in my reflective diary.

Reflective Diary

Throughout the period of data collection, I maintained a reflective diary. Although reflexivity is considered an important part of quality assurance in research (Hammersley & Atkinson, 1983; Mason, 1996; Murphy et al., 1998) there is much less guidance on maintaining such a record. I attempted to analyse events in the clinic and parts of interviews that had particularly interested me. Events from my role as a volunteer supporter, remarks from colleagues, and my reading also sparked entries. In an ethnographic study, even the most non-participant observer has an effect on events (Hammersley & Atkinson, 1983), and the importance of this needs to be acknowledged and reflected on, and may provide data of interest (Sword, 1999). Diary entries were very useful when I returned to read them over: interestingly, I discovered that events, remarks or interactions at widely different points in time could spark similar reflections, and the effect was to see a very slow process of ‘worrying’ the data (as a dog might worry a bone) in order to get at meanings it produced for me.

Data Analysis

Even a relatively small study generates a large volume of recorded data (Mays & Pope, 2000). Computer software packages have been created to help in data management, and I considered using one of these but decided against this. Probable costs (for software and training), as well as the time involved in familiarising myself with the tool were considerations. As a novice, it also appeared attractive to experience getting to grips with the data in my own way, as each software package appeared to have features which might influence how I would treat my data. I wrote up my transcriptions and fieldnotes on my computer using ‘Word’ and created coding files using ‘cut and paste’ methods. Interestingly, I found myself printing large screeds of paper in phase one, and relying more on computer files alone in phase two. This may have resulted from increasing familiarity with the coding process.

Ethnographic interviewing and the construction of a full ethnography have been described (Spradley, 1979, 1980), but analysis of ethnographic approaches are not defined separately from other qualitative data analysis techniques. Approaches may be highly individual (Murphy et al., 1998). As I was working alone, and the setting and the focus of the study were not well

described beforehand, and little previous theory exists, I sought a structured approach to data analysis and chose to use grounded theory. Crotty (1998) notes that grounded theory may be considered a methodology, separate but equal to ethnography, but also that it can be “viewed as a specific form of ethnographic inquiry that [...] develops theoretical ideas” (p78). Hammersley and Atkinson (1983) similarly note the advantages of its use in moving ethnography deeper than description.

A number of variants of grounded theory exist (Hammersley & Atkinson, 1983). I elected to follow Strauss and Corbin (1998), as their approach was thoroughly described. Charmaz and Mitchell (2001) criticise this text as overly mechanistic and prescriptive, and Charmaz (2002) suggests that constructivists might follow it more loosely than objectivist theorists; Corbin asserts “this is *not* a recipe book” so I felt able to take some latitude (Strauss & Corbin, 1998, pxi; italics in original). I attempted to follow the approach closely, but not slavishly, finding this encouraged me to “interact with data not just subjects” (Charmaz & Mitchell, 2001, p165).

Grounded theory emphasises that data collection and analysis are not distinct phases, but that initial analysis of what is seen and heard in the early phases of observation shape the future course of the work. As I noted, from the first, my fieldnotes were in columns, so I produced a simultaneous account of what I had seen and heard and initial thoughts on codes. I then conducted initial line-by-line ‘open’ coding of my fieldnotes and transcripts, creating a file of codes in which chunks of data were grouped together. I then used these codes to reanalyse the data, and to find further instances to widen and deepen understanding of the code. At times codes were split apart or merged. I thus attempted to sensitise myself to multiple meanings in the data, and to ensure that the meanings I identified were supported by data. Strauss and Corbin (1998) describe different types of questions to ensure that data are systematically considered, so that explanations and theorising do not rest just on the most striking incidents, but attain a “balance between objectivity and sensitivity” (p42).

I examined codes in terms of their properties and grouped them together, in a process of reintegrating the fractured data to create meaningful explanations. Throughout, I wrote ‘memos’ which explored the meaning of each code. These varied in complexity, with some remaining on-going through to the final writing up. Through this time, I continued to search the literature to aid my understanding of what I was observing. My theorising thus emerged from my interaction with the data and with the literature, as Strauss and Corbin (1998) suggest.

Strauss and Corbin (1998) recommend a process of theoretical sampling to ensure all areas of the data are explored, and that this continued until saturation is reached, where no new issues

are identified. As the study was designed at the beginning of the process with a set period of observation, and a target number of women to recruit, this limited the ability to satisfy this requirement. I certainly felt, toward the end of interviews in phase two, that if I were to return to the clinic, or, perhaps, conduct observations in another clinic setting, I might gain further insights⁶⁹. However, this was not pragmatically possible. I certainly identify with Strauss and Corbin's (1998) assertion that "by the end of the inquiry, the researcher is shaped by the data, just as the data are shaped by the researcher" (p42).

Using Data in the Thesis

In presenting my analysis, I adopt Spradley's (1979) recommendation to make good use of quotations from women in the study to support my assertions, grounding my writing as well as the analysis in the data. I balance "scientific reporting" and "artistic licence" by removing utterances from longer passages, reducing repetition, and also, at times, removing my own interjections (Sandleowski, 1994, p 480). I wanted to preserve the voices of my respondents and to demonstrate how my arguments are tied to what was said. My system of indicating the source of quotations (which I give in the next section) indicates where each data extract or quote came from.

Note on Convention for Quotations and Data Extracts

In using quotations from interviews and extracts from my field notes I have created notation which follows each quote in brackets.

- Name of woman (these are all pseudonyms)
- Number 1 or 2 – means this was collected in phase one or phase two
- For phase one data, the number 1 is followed by 'f' if it was from a fieldnote, 'i' if it came from a taped interview, or 'taped interaction' if it came from one of the weighing episodes I recorded by tape.
- Health visitors' utterances in phase one are indicated as 'HV:f', if the extract is from a fieldnote, or 'HV:i' if it is from a taped interview. All data extracts from health visitors are from phase one.
- Data collected during a breastfeeding group session is noted as 'BG', with 'BG:f' meaning data from fieldnotes, and 'BG:i' if it was from the one session that was taped – these data extracts are all from phase one.
- In quotes from phase two, the name (pseudonym) of the mother is given, then '2' to indicate the quote is from phase two, and then the number 1, 2, or 3. This indicates which interview for that particular woman the quote is from. Thus "Sarah 2:1" means the extract comes from my first interview with Sarah, a mother in phase two. Table I,

⁶⁹ This may partly be due to the desire to re-experience the observations 'knowing what I know now'. By the end of the study, I was gathering data which confirmed my analysis, rather than finding new issue, and so giving me assurance of the comprehensiveness of the data.

on pages 89-90, gives some details of women in phase two. By looking at this, it would be possible to check what age Sarah's baby was at the time of this interview.

Me, the Researcher in the Research

"I have given suck and know/
How tender 'tis to love the babe that milks me"
(Shakespeare, Macbeth, I. vi. 54).

Most qualitative investigation of breastfeeding issues has been conducted by health professionals or academics from a variety of disciplines. During this study, I met reactions of confusion from fellow students, those I researched, and social contacts that I was spending years researching breastfeeding when I am not a health professional⁷⁰. Many who write about breastfeeding note their own experience of having breastfed a child or children (van Esterik, 1994; Carter, 1995; Smale, 1996; Blum 1999; Stearns, 1999; Britton, 2000; Hausman, 2003; Dykes, 2004). Dyball (1992) is unusual as she had experience of both breastfeeding and bottlefeeding⁷¹. I have come across no study of the experience of infant feeding in which an author reveals that they have children and have never breastfed⁷².

Certain personal experiences should not be required in order to research breastfeeding, but I recognise that research findings rest on the embodied experience of the researcher. For example, Blum (1999) reports that, during an interview, an LLL⁷³ leader asked her why she was doing this research and she "burst out that breastfeeding was one of the most intensely ambivalent experiences of my life" (p208). How did this influence what Hausman (2003) characterises as Blum's understanding that breastfeeding has "fluidity of meanings" (p215) and her assertion that supporting "genuine freedom" in infant feeding choices (including use of formula) for women will be best for their babies (p201)?

As a volunteer breastfeeding supporter, I have invested a considerable amount of time and received much support to 'frame' my own breastfeeding experiences. Chesney (2000) felt that her whole life shaped her research and her research shaped her life. During my study I made many entries in my reflective diary. I present this section to help to 'locate' my observations,

⁷⁰ Although why it should be assumed that health professional interest in breastfeeding is self-explanatory is not clear to me.

⁷¹ Actually, she began by breastfeeding her first child and did not manage to continue. Many of the breastfeeding mother/authors describe using bottles of expressed milk or formula in combination with breastfeeding – often deemed necessary to continue their academic careers.

⁷² Some researchers have no children (Hoddinott, 1998), others are simply silent on their personal experience.

⁷³ La Leche League is the major volunteer breastfeeding support organisation in the USA.

and to explore the influence of my personal standpoint on the written research⁷⁴ (Hammersley & Atkinson, 1983).

A Thumbnail 'CV'

I was born in the United States of America, and my mother breastfed me, the eldest of four daughters, although I was born at the low point for breastfeeding initiation in the US. My youngest sister, born in 1967, was breastfed for almost a year. Interestingly, I have no memory picture of this, although I received a strong message that breastfeeding is 'just what you do'. My family moved to Berkeley, California when I was 11 and I spent my teens in the 1960's city of free love and free speech.

I attended a UK university and immigrated permanently in 1982. As a foreigner, my perception is that I often have to practice ethnographic observations of natives in order to understand and negotiate the social world I have adopted.

My first child was born in 1986, two and a half years after my first husband's sudden death. Childbearing is an experience of intense personal meaning for most women, but the meaning varies. For me, having my son was an affirmation of life and the meaningfulness of life in the face of death. In my first week in hospital, breastfeeding became overwhelming and I felt bewildered in the face of my son's desire for fairly constant contact and feeding. Receiving little practical support, and banned from taking him into bed, I acquiesced in giving bottles of formula. It was then that I realised how deeply breastfeeding mattered to me. The experience of asserting the value of breastfeeding, fighting against the odds to recover full breastfeeding by hospital discharge, and my perception of the careless attitude and lack of useful knowledge about breastfeeding within the maternity care services greatly affected me.

I found support from the NCT, a charity which has trained volunteer breastfeeding supporters for many decades (Smale, 1996); and commenced my training for this role when my son was six months old. My daughter was born two months after I qualified, and some months after my son was weaned. I went on to breastfeed her for nearly four years, and the two of us were able to negotiate her weaning in words (see Bengson, 1999; also Gribble, 2005).

⁷⁴ I benefited in my thinking through these issues from two opportunities to present papers. At a research seminar in the Department of Midwifery Studies at UCLAN in November 2002 I presented "You're not a midwife? Why are you doing this research?" and at the annual post-graduate students' research forum at Manchester Metropolitan University in May 2003 I presented "You're not a health visitor? – what does that mean for your research?".

The birth of my son sensitised me to the influence of marketing on women's infant feeding decisions. I joined the UK group, Baby Milk Action, in 1986 and have remained a member, becoming an area contact and an advisor. While such activist interest can be characterised as a wish to remove choice from women, I experience rather the desire to protect women and their babies from commercial pressures. This has involved me in the politics of baby milks in the UK (see Robinson-Walsh, 1999). Two writers who were influential in confirming for me that my interest in breastfeeding was not just in helping others to achieve it, but had wide political ramifications were Palmer (1993) and Van Esterik (1989).

In 1997, having been a breastfeeding counsellor for 10 years, I was closely involved in the issue which split the NCT, when the organisation accepted sponsorship from Sainsbury's. This UK supermarket is a distributor (retailer) of breast milk substitutes and, at the time, had an 'own brand' formula milk, meaning it was technically a manufacturer. The World Health Organisation Code of Marketing of Breast Milk Substitutes (1981), a recommended minimum for legislation for all nations, gives responsibilities to both manufacturers and women's groups to ensure donations which may spark conflicts of interest do not take place.

This internal argument led to the resignation of many breastfeeding counsellors when NCT refused to renounce the money (Purves, 1997). I have been not only "a member of the sub-group 'mothers who have breastfed' and the even smaller one 'women who become very interested in the subject'" (Smale, 1996, p99), I have also been one of the women who abandoned the comfort of a known volunteer role on a point of principle.

Some counsellors who left NCT set up a new breastfeeding support organisation, The Breastfeeding Network (BfN) (Britten & Tudhope, 2003). Since 1997 I have worked as a BfN breastfeeding supporter. I have also been a tutor, training new supporters, and for three years served as a trustee. Supporting breastfeeding women and shaping the ethics of breastfeeding support have thus been a major focus in my life.

During the whole period of devising, conducting and writing up the study, I continued to be involved with breastfeeding work. I might sit in the clinic and interview a mother in my role as researcher, and return home to find a call or email from a mother to which I would respond as a supporter. After the first few sessions in the clinic, I took steps during the period of data collection to remove myself from engaging in voluntary breastfeeding support, as it seemed to me that it could have the effect of confusing my impressions. At other times, when not so intensely immersed, working with mothers and discussions with colleagues have offered opportunities to deepen reflections.

Familiar? Strange?

Health visitors do not exist in the USA, so I came to the birth of my first child with no assumptions about their role. I received little support for breastfeeding from over-worked London health visitors, and attended a weighing clinic in a hall used for the purpose once a week with my son. With my daughter I went to clinic only a few times – and both my children grew visibly round, very quickly. In my role as supporter, I have heard a wide range of women's opinions on their health visitors. I have often worked alongside health visitors and also been involved in breastfeeding training sessions in a variety of areas in the Northwest. At the time I started the study I had not attended a baby clinic for a decade. It was hard to know how to follow the injunction to make the familiar strange (Hammersley & Atkinson, 1983), as I felt the clinic setting was actually rather unfamiliar⁷⁵!

Volunteer Breastfeeding Supporters and Health Professionals

Training for midwives and health visitors includes breastfeeding as part of a wider curriculum⁷⁶. Volunteer supporters' training focuses on breastfeeding and ranges from the physiology of breastfeeding, how to analyse breastfeeding difficulties and suggest helpful interventions, to offering non-judgemental support (Smale, 1996). Volunteers must have breastfed themselves, and this embodied knowledge, which is 'debriefed' or put into personal context, is valued alongside taught knowledge. The process of debriefing, which is on-going through training and supervision is analogous to 'bracketing' which researchers undertake in order to keep personal reactions to events in fieldwork apart, while acknowledging that they influence understanding (Ahern, 1999). Although it has been argued that this would be useful for health professionals (Crawford, 1992), it does not figure in their training. Smale (1996) and Ker (2001) are each volunteer breastfeeding supporters who conducted research; Smale (1996) offers some reflection on the influence of this role on her approach.

The philosophy of training of both the NCT and the BfN emphasises empathy, genuineness and unconditional positive regard (Rogers, 1961). The approach is explicitly woman-centred, and aims to help mothers to define their own goals and achieve them. The logic of this position leads volunteers to support women to stop breastfeeding or supplement (Hunter, 1998, 1999) although many feel a counter-balancing desire to prioritise breastfeeding unconditionally (Minchin, 1999). These tensions are continually evident for volunteers, but may also be felt by professionals (Shaw-Flach, 2003).

⁷⁵ Although more familiar than it would be to someone just off the plane from the USA – or the Congo.

⁷⁶ I have commented on professional training in the literature chapter.

Two research projects have compared volunteers with professionals⁷⁷ in the UK. Clarke et al. (2002) found that midwives seemed to prioritise information-giving over more facilitative styles of communication used by volunteers. A comparison of midwives' and BfN supporters' responses to a validated tool for assessing the skills of breastfeeding helpers⁷⁸ found that BfN supporters scored significantly higher than midwives (Hall Moran et al., 2005). BfN supporters were found to emphasise active listening, encourage to women to explore feelings, and suggest coping strategies, but at the same time, also to focus on teaching relevant physiology, positioning and attachment (Hall Moran & Dykes, 2002). Thus volunteers appeared to be both more bio-medically accurate in 'diagnosing' and intervening, and more concerned with the woman's psychological and social situation.

In my study, there were instances when I felt that women asking questions in the clinic or breastfeeding group could have been offered particular breastfeeding information or skills-teaching. Indeed, the lack of this detailed information began to appear to me as a positive physical presence in its absence – a sort of persona, hovering in the corner of the clinic, that only I could see⁷⁹. In the breastfeeding group, Rachel complained of sore nipples, breasts not feeling drained after a feed and a baby who did not stop feeding of his own accord. If she had been consulting me as a supporter, I would have investigated her positioning and attachment and helped her ensure the baby was feeding deeply, so not irritating her nipple, and ensuring he accessed adequate fat (Woolridge, 1996; Renfrew et al., 2000). The health visitor offered some useful information, but neither grounded it in a coherent explanation of breastfeeding physiology or offered a practical help with the physical skills of positioning and attachment. I made many reflective entries on the ethical dilemmas of seeing women receive information which appeared less helpful than it could have been, yet knowing that what they received accords with accepted standards of care in UK community clinics. I did carry cards on which I had typed the phone numbers of all four breastfeeding support organisations in the UK to give to any mother who might seek information. I offered one of these to Rachel.

Discussing observations of such an absence is difficult. Hunt and Symonds (1995) in an ethnography of a maternity hospital described a focus on "aspects of care that I [Hunt] considered inappropriate or falling below my own high standards" (p50). Savage (2000a) described how the physical act of bending by the patient's bedside, and the residual embodied memory from her own nursing days, had a powerful effect on her understanding of the hospital ward she researched. I had to check my impulse to look closely at how women were feeding: at

⁷⁷ In both, the professionals were midwives.

⁷⁸ I was one of the research subjects in the BfN group in this study.

⁷⁹ I thought of this to myself as the 'don't mention the war' syndrome. This analogy is undoubtedly due to my son's love of the 'Fawlty Towers' television series.

times I saw positioning of the baby in his mother's arms and posture of women which would be unlikely to help facilitate pain-free and effective breastfeeding (Renfrew, 1989; Renfrew et al., 2000). I practiced a mental 'sitting on my hands' to stop from looking closer and showing the mother with my own gestures how to move her baby across her body to obtain a different latch. My embodied knowledge had to remain bracketed, or even chained. At the same time, this is part of what I observed in the clinic, and the lack of technical expertise was a feature of the scene, which informed my interpretation of what I did see and hear⁸⁰.

How Study Participants Viewed Me

Others have described dilemmas of how to dress and what activities to participate in during ethnographic study (Kirkham, 1989; Hunt & Symmonds, 1995; Sword, 1999; Dykes 2004). I adopted a rather conservative mode of dress and found myself wearing a lot of dark blue – perhaps my own stereotype of nurses? Several times women in the study explicitly assumed I was a midwife. My information sheet⁸¹ described me as a volunteer breastfeeding supporter, but perhaps the affiliation with a department of midwifery studies led to the confusion. I mentioned having children myself, and having breastfed, when this naturally came up. It seemed that most women had some idea of the academic researcher and viewed me in this role⁸².

Early ethnographers 'entered the field' after a long physical journey and remained there for some time; my study involved continual re-entry and coming away. Although this resulted in being less 'immersed', it also allowed much thinking time in-between. In fact, this interleaving of research with the rest of life gave me a feeling of connection with the breastfeeding mothers I was studying: they fed babies interspersed with baby care, household chores, social life, work dilemmas, moving house, holidays and care for other children⁸³. The feeling of never having enough time to complete a task in a leisurely fashion was familiar from my own breastfeeding days (months, years). Of course, this was probably not evident to women, who saw me arrive at the clinic or their house, with my bag and pen, looking organised and relaxed.

It seemed possible that the health visitors were aware that I might have knowledge about breastfeeding that they might or might not lack. They also seemed to assume what my attitude

⁸⁰ My ethical responsibility might be considered to be to intervene. However, all the women were receiving care well within the usual standards for the UK.

⁸¹ A copy of this is to be found in appendix 1.

⁸² One mother in the breastfeeding support group asked me when I was planning to return to the USA – I had not imagined I should mention that I live here permanently. This is an example of unforeseen issues which arise!

⁸³ At times it felt like a return to the days when I could only cook a family meal with a baby strapped to my back – many is the domestic chore I have done with my PhD 'strapped' to my back.

toward items with logos is⁸⁴ (see chapter 5). I certainly did not intend to confront them with a different approach to breastfeeding support and, indeed, felt that we had overlapping rather than separate knowledges.

In the breastfeeding group a discussion began about a television programme on Neanderthal people. This had stated that they breastfed for four years, and the health visitor asked me about this. I replied that I thought it was likely to be quite plausible, to the astonished comments of the mothers. Yet, this behaviour they found so alien, even for a different species of human being, was, in fact, what I had done with my daughter. I truly felt like a being from a different planet that day.

Marginality as Researcher

From the time of entering the fieldwork, I recorded many reflections about my status. I had grown a long way from the new mother I had once been. I have never been a health visitor, although our 'giving breastfeeding information and support' roles overlapped. I was a novice researcher, but had listened to hundreds, probably thousands, of women talking about breastfeeding. The data I was collecting and analysing began to demonstrate that breastfeeding is a liminal activity for women in our society. At the same time I was engaged in the clinic with the marginal status of the observer (Hammersley & Atkinson, 1983), and "poised at the moment of entry into the public world of academia as an active participant, in transition between different social worlds" (Edwards & Ribbens, 1998, p5).

As I progressed through the study, my BfN role changed, too. I felt that, from being a volunteer supporter with a stronger than usual interest in research, I was becoming a hybrid creature, removed from my peers. I had already challenged the boundaries of volunteer support, by co-writing a leaflet on thrush and breastfeeding (Jones & Sachs, 1998), which gave information on diagnosis and drug therapy, topics usually left to medical texts⁸⁵. Through an increasing immersion in academic ways of seeing and understanding, I have become more unlike my volunteer peers. Ribbens (1998) talks about "hearing my feeling voice" (p24) as she let her personal mothering into her research. I hear my 'reading, citing voice' becoming louder.

⁸⁴ Probably correctly – it is on record (Robinson- Walsh, 1999; Sachs, 2003).

⁸⁵ Wendy Jones, my co-author, is a pharmacist as well as a breastfeeding supporter, and insured to give such information: we also very carefully based the leaflet on the best available evidence.

In chapter 11 I describe how women may experience breastfeeding as entering a different sort of space, and beginning a journey through a marginal experience; for me, doing the research cast me into a similarly marginal state, embarked on a journey with an unknown destination.

Conclusion

In presenting the practical steps I took in setting up my study to obtain data, as well as detailing how my data were handled, I provide evidence that this work has been conducted throughout with attention to ethics, quality and veracity. I attended throughout to the voice of those I researched, both women and health visitors. I also attended to my own voice. I have presented a fairly lengthy exploration of myself in the research, in order to help illuminate how I influenced the co-production of the data.

In the following chapters, I begin with an ethnographic description of the clinic and interview settings; describing how I saw these through my 'stranger's' eyes. This forms the basis for the analysis of differing aspect of the meaning of weighing, and the experience of breastfeeding, which follow.

Chapter 5: AN ETHNOGRAPHIC ACCOUNT: THE BABY CLINIC AND BREASTFEEDING IN A NORTHWEST TOWN

“Infant feeding is not easy to study. We have to visit women in their kitchen, talk to them in their fields or factories or refugee camps – and listen to them in their own languages before we begin to know much about their infant feeding patterns and choices. The notion that mothers make a consistent plan and stick to it may not be realistic. Mothers simply cope, doing what makes sense in the circumstances of each day – for example: breastfeeding exclusively on Monday, including a few times through the night; leaving the baby with a neighbour and a formula feed on Tuesday, while a mother follows up on the possibility of a job in a near by town, giving an extra feed of supplemental milk on Wednesday because the baby is fractious and gives it extra breastfeed that night and evening for comfort” (Helen Armstrong, WABA & UNICEF, 2003, speech by Lewis, p14).

I located my phase one observations in a child health clinic, and focussed on weighing, placing myself in a medical space to observe breastfeeding. In phase two, I moved away, to the family

space of the women who agreed to take part. In this chapter I describe the two settings – the one defined by the physical location, the other more diffuse. Together these supply a description of breastfeeding experience in this section of a UK town. An ethnographic description can illuminate the subject of a study, and draw readers into the world of the researched (Spradley, 1979). This helps locate my interpretive analysis of subsequent chapters in a particular setting (Charmaz, 2002).

An Ethnographic Description of the Baby Clinic

Choosing a clinic as my location for fieldwork involved interesting reflection that there are few places one could go in order to observe breastfeeding mothers in our society. Hospitals, clinics, mother and baby groups and coffee mornings appear to offer the few structured meeting places for breastfeeding women. In thinking through the choice of a suitable place for observations, I was already being presented with our cultural identification of breastfeeding as a medical issue. In reflecting on how few places I could go to meet breastfeeding mothers, I was struck by our social separation and isolation of breastfeeding; I return to this theme in chapter 11.

The women in this study shared temporal and spatial experiences of breastfeeding. Within the UK, regional trends in initiation and duration of breastfeeding have been documented over many years (Hamlyn et al., 2002), and an interesting reversal has been witnessed in Scotland where figures which were lower than UK averages have changed in response to coordinated efforts by the Scottish Health Executive (Broadfoot et al., 2005). Within regions, very local town or neighbourhood factors may influence rates (Pain et al., 2001). I noted, in chapter 4, that in this town, the breastfeeding rates were lower than within the region as a whole.

The Breastfeeding Experience of a Community?

Most women in the study were originally from the area, mentioning local family and connections. Most mentioned comments of family members about breastfeeding and weighing, indicating the influence of the wider community. There were indications that women in this study had contact with each other, and that they knew other breastfeeding women locally who had not entered in the study. In phase two women sometimes mentioned someone, saying ‘I think she is in your study’. Several women attended baby massage sessions, and a few mentioned coffee mornings run by the National Childbirth Trust. The women thus appeared to be members of a loose network with several points of contact other than the clinic itself. In this

way a local experience of breastfeeding, of weighing, and of concerns about the two could be shared.

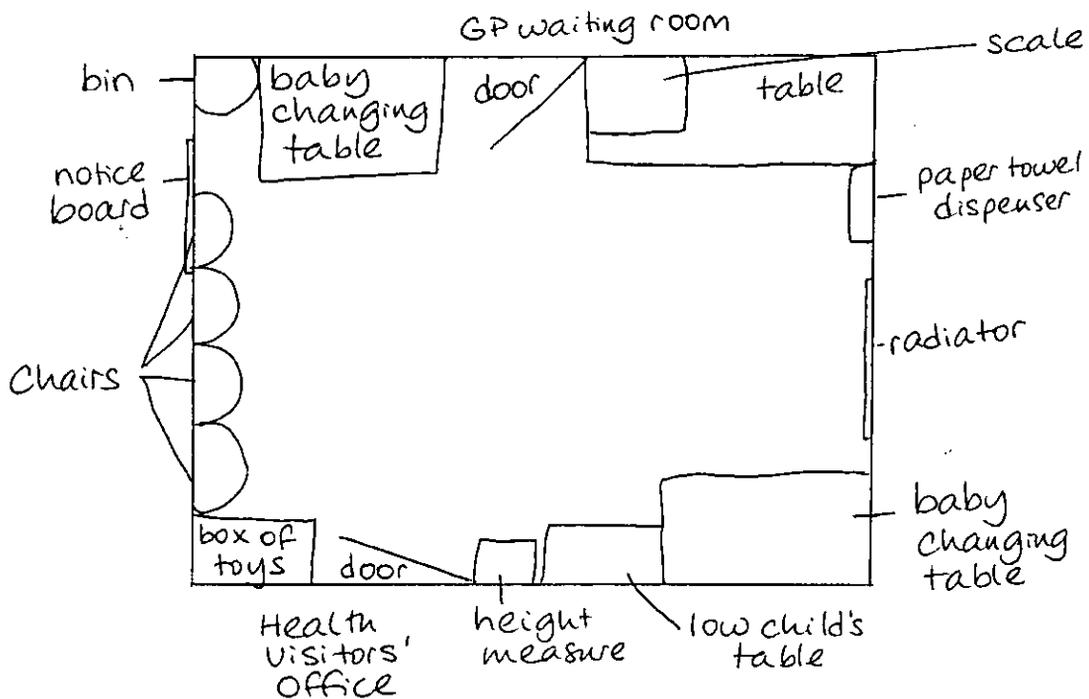
The Baby Clinic

The clinic where I conducted observations and interviews for phase one is in a Greater Manchester town. In this part of the Manchester sprawl, mill chimneys dominate the skyline, and older houses of red brick are interspersed with newer concrete buildings. This clinic is on the edge of the town, so that the Pennine hills can be seen. The main street is a scrappy mix of businesses (a small supermarket and a petrol station), houses, pubs and old mills. Houses in the area are a mix of Victorian two up - two downs, larger Victorian houses and new estates. The clinic itself is on a street parallel to the high street, in a low, modern building, which houses a local GP practice and a small pharmacy.

On entering the 'pre-fab' building a short corridor leads to the GP waiting room, with reception window, where GP patients report, and where baby milk is on sale. To the right is the door to the clinic, which is opened during clinic sessions. Inside is a moderate-sized room, whose only window is a skylight, with a door opposite the entrance from the clinic, leading into the office.

The room is functional, with about six upright chairs ranged against the walls, a standing-height measure, two baby changing tables, a box of rather tatty toys tucked in the corner and a plain blue carpet. Behind the door, which opens in from the surgery waiting room, is a table with the

Figure 1: Sketch Map of the Baby Clinic



scale. On the wall behind is a paper towel dispenser, and on the table are a spray bottle of disinfectant, and a box of clinic record cards, brought out for clinic sessions. A head circumference tape and a 'weeks wheel' complete the equipment. The walls are adorned with a bulletin board, an A4 notice giving the prices of baby milks on sale at reception, and a leaflet rack, with a few leaflets on weaning and other topics.

Clinic Interactions

Mothers park their buggies outside the clinic door, in the GP waiting area – though younger babies often arrive in a car seat. A mother enters the clinic room, and goes straight to a baby-changing table and begins to prepare her baby by stripping off its clothes. This often precedes any interchange with the health visitor; although they may exchange greetings; there is an air of brisk functionality. If others are there, the mother might hand her red book to the health visitor to 'mark' her place in the queue.

It was notable that mothers arriving knew what to do and simply began 'prepping' their baby for weighing. When a woman arrived for the first time, she often hesitantly entered and looked around. Sometimes she might spot me, sitting in view of the open door and not visibly

occupied, and ask what she should do. It seemed that women on their first visit were gingerly entering a space with its own rules and one not set up to provide an instant welcome. I could tell mothers new to the clinic the basic rules ('Undress your baby and the health visitor will weigh your baby when you are ready', for example), but I obviously did not observe how newcomers learned what to do when I was not there.

Once her baby is nearly naked, the mother waits with the baby laid on the changing table, wearing just a nappy, until it is her 'turn'. The health visitor ensures that the scale receives a squirt from the bottle of disinfectant and that a piece of blue paper towel is laid in it. Functionally and ritually, the scale is purified. At this point the health visitor approaches the mother and the interaction begins. Even if there are no other mothers in the clinic and the health visitor has greeted the mother, there is an air of beginning the proceedings at this moment. On an early visit I was struck that the health visitor asked "Can I weigh and measure him?", noting that this was not assumed. However, this sort of question was not usual, and the interaction tended to proceed without explicit discussion. I did not witness any occasion when a mother of a baby under six months entered the clinic and asked to speak to the health visitor without first preparing the baby for weighing. Two visits to the clinic which did not involve weighing are described below.

The literature speaks about health visitors weighing babies, however what I clearly observed is mothers physically lifting their babies into the scale, and then stepping back a bit to allow the health visitor to read the weight. The health visitor read the amount in grams, and then pressed a button on the scale which converted the weight into pounds and ounces. This weight was then told to the mother. The mother then removed her baby from the scale, while the health visitor wrote the weight and plotted it on the chart in the parent-held child health record (PCHR). The mother put a nappy on the baby and the discussion about the weight and health of the baby would begin.

The mother physically lifted the baby in and out of the scale, and the health visitor 'weighed' the baby in the sense of reading, plotting and announcing the weight. Health visitors, unlike nurses in other specialities, are not associated with 'hands on' care (bed pans, palpating abdomens and delivering babies). The weighing interaction, with the mother performing the work of moving the child, fits in with this way of work.

Observing weighing interactions many times, I received a clear sense that this was the heart of the clinic visit. The health visitor might chat to a mother as she was undressing the baby (if there was no one else in the clinic, or the mother seen previously had finished) but she would

defer any pronouncement on the baby until the weight was known in relation to others. For example a mother came in with an 18 month-old who was weighed. The health visitor said the weight and the Mum asked, "Is that ok?" The health visitor replied, "I will just plot it" (1:f). Another mother forgot to bring her book. When the baby was weighed the health visitor said "I can't say if it's ok, because I can't plot it – you can plot it yourself or I will do it next time you come" (1:f).

These remarks point to the central importance of ensuring the entire weighing sequence is completed before its 'meaning' can be known. The sequence is:

- Mother undresses baby while health visitor sprays the scale with disinfectant and places a sheet of paper on the scale
- Mother places baby on scale
- Health visitor reads the weight in metric then imperial weights and announces this
- Health visitor writes and plots the weight
- Mother puts the nappy on the baby
- The health visitor and the mother discuss the weight and the curve plotted on the chart

The actions are performed in a low-key way, the health visitor does not don a special gown or voice an incantation, but the whole sequence has a ritual aspect to it. Each actor has her part – the mother offers the baby up to the judgement of the scale and the health visitor acts as intermediary between the mother and reading the weight. At the heart of the ritual is a moment of uncertainty, and the clinic encounter between mother and health visitor revolves around this. At one minute the baby is 'unknown', potentially at risk from a weight that is problematic. Once the weight is recorded and charted, it can be known and interpreted. In general the extent of interpretation was related to the relation of the day's weight to the centile on which previous weights had been plotted. Mothers might express concern at a weight, or relief. They might also continue to express uncertainty. Knowing the weight appeared to be necessary, but not completely sufficient, to know how to feel about the baby and his or her condition.

From my early visits to the clinic, observing and thinking about this interaction evoked a picture of a visit to the Delphic oracle in ancient Greece, or a ritual sacrifice and reading of the entrails by a Roman augur. Obviously I have never seen either of these, but have vivid mental images from childhood reading. The combination of supplicant and priest/ess turning to a mystic power to inform important life decisions, alongside the requirement that the 'voice of the god', as manifested through cryptic verse, chicken innards or pounds and ounces, be interpreted, brought this analogy to mind. Perhaps another similarity is that the two actors are

required to behave as if they believe in what is revealed, although we have accounts from an increasingly secular Rome of many 'going through the motions' only half-believing in the gods. In the same way, women may reject the primacy of what weighing their baby can tell them, but it remains a compelling ceremonial moment with the power to shake the most sceptical participant.

The clinic room was visible from the GP waiting area and the door was left open during the sessions, so that it was open to public view. However, the end of the table with the scale on it was placed just behind the door. This meant that the one part of the room screened was the scale – where the baby could lie and the digital display could only easily be seen by the health visitor: the mother would have to crane her head to see it. This positioning added to the impression of the recorded weight as the 'secret heart' of the clinic interactions.

As noted, women entering the clinic for the first time would not know what to do, and might ask, or watch others, in order to learn their part. We live in a culture where there are many general weighing rituals. A woman entering the clinic with her first baby would have likely been weighed in her own childhood by a school nurse, might have developed personal weighing rituals (and had the opportunity to discuss them with friends and read about them in many magazines), have experienced medical weighing, if not before, then during, pregnancy and would know, even if she did not see, that her baby had been weighed soon after birth. She would have experienced at least one baby weighing at the first health visitor home visit and have been told to expect to have her baby weighed at the clinic. Thus the learning for this ritual could be brief, as the ground was thoroughly prepared.

Living within a society which weighs throughout life, the extent of this underpinning may simply seem normal. Sarah, a participant in phase two, herself a health visitor, reported that refugee mothers from Africa on her caseload had little interest in having their babies weighed. Olivia mentioned "other ways of knowing" (2:2), using the example of women in traditional cultures who could know about their baby without weighing.

The moment of uncertainty at the centre of weighing appeared to be shared by mother and health visitor. I asked health visitors about their use of other ways of assessing infant health (for example; skin tone, stools, baby's contentment). They confirmed that these were things they looked at but would not like to commit themselves to saying 'this baby looks absolutely fine, no need to weigh', despite experience with many babies and such encounters. The weighing interaction thus formed the nub of the clinic visit, around which other discussions were framed. Certainty about the health or wellness or maybe just the 'okayness' of the baby

was arbitrated by the number from the scale and the placement of this figure on the centile chart.

I have found no other observational study of health visitors in the clinic or at home visits, which describes who lifts the baby onto and off the scales. The division of labour I noted in this clinic may or may not be usual. If it is usual, it raises questions about the relevance of studies which involve nurses conducting weighing and how they relate to practice. At busy times, this division of labour gave the clinic the air of an assembly line, with babies prepared for the scale, passed to the health visitor for 'quality control' and reassembled into nappy and clothing⁸⁶.

Assuming the Roles

During the course of fieldwork there were two times when I spontaneously participated in the weighing ritual. In the first case, a mother with twin babes and a toddler came into clinic. I had met her previously and it was natural to ask if she would like me to hold one baby while she undressed the other. As the toddler also wanted attention, she asked if I could undress the twin, and put him on the scale.

Although I hold small babies fairly often⁸⁷, the awkwardness of undressing one on my lap made me feel unskilled. Placing his body in the scale pan was difficult – it is a difficult manoeuvre to get a squirming baby whom you do not wish to hurt into a curved scale pan! I was so taken up with the task, that I did not take in the weight as it was announced (although the mother did), much less have a chance to read it myself. Thus, the supplicant nature of the mother, dependant on information given by the health visitor became clearer to me.

On another occasion, in the breastfeeding group, Liz was delayed and the receptionist gave me the key to open up the clinic room. Vicki, whose son had been ill, was anxious to weigh him. She undressed him and put him on the scale, and, imitating what I had been watching for months, I read the display. We reported the reading to Liz when she arrived and she plotted it and talked to Vicki about it: in this instance, I could feel myself focussing on the number and not the baby. These encounters provided embodied evidence of how the roles might feel.

Cases where Mothers Read the Scale

⁸⁶ At busy times babies might be undressed on one changing table and dressed on the other, meaning that the mother physically progressed around three sides of the clinic, from changing table to scale to the next changing table.

⁸⁷ When I visit mothers who are having trouble with breastfeeding I often get handed the baby to hold while the mother gets herself ready to feed or makes me a cup of tea.

As I became interested in observing the weighing ritual, I sought to document instances where elements differed from the model given above – a form of discrepant case. Women did sometimes weigh their own babies. I noted:

Carol quietly goes and weighs her baby. Liz (HV) returns and hands out drinks. She asks Carol about the weight and says 'shall I put it in the red book?' They discuss the chart (BG:f).

Several cases where the mother weighed her baby, then asked the health visitor to plot the weight were noted, all in the breastfeeding group. Sometimes mothers announced the weight to the group; in the example above, it was clear, over several sessions, that Carol was very concerned about her baby's weight gain (and other issues); she began to give complementary formula and soon stopped breastfeeding completely. She tended to weigh the baby herself, very unobtrusively, then pick a moment to speak to Liz about it privately. She also had some home visits with Liz to discuss feeding issues.

Centrality of Weighing – Contrary and Confirming Cases

I began to wonder if there could be visits to the clinic which did not involve weighing, and during the course of six months I saw two children who were not weighed. One was a toddler. The previous evening he had had a fall and his mother had taken him to the local hospital. They had waited for four hours and still not been seen, so had returned home and the mother came to the clinic to ask advice on what she should do. Another mother of a baby old enough to be crawling came in to ask if a sore patch she had noticed on her child was eczema and if she should seek a GP appointment or use an over-the-counter cream. Both cases involved babies over six months whose mothers had a specific medical enquiry. There may be other circumstances which result in a visit without weighing, however one health visitor responded to my question about this by saying everyone is usually weighed.

During the summer holiday a childminder brought an older baby to be weighed (at the mother's request). The scale is converted for children over a year by the removal of the pan and a seat attached instead. The child sat on this but the scale would not show a weight, although she was removed and set back down several times. The child, who had not been keen in the first instance, became quite upset and began crying. The health visitor went into the office and got a set of portable scales (probably not designed for children over nine months). The child was laid on this, which she disliked, so she kicked and wriggled, making the scale hard to read. The health visitor announced "we'll go for 20 pounds, 12 ounces" (1:f); clearly showing that this could only be regarded as an approximate weight.

This episode was witnessed not only by the childminder, the health visitor and me, but also by three other mothers, two older brothers of another baby and the child's sister. At no point did anyone suggest that the upset caused to the child was not worth obtaining an approximate weight, although some concern for the child's distress was expressed and another mother offered her a box of raisins (which failed to interest her). Of course the carer may have felt unable to leave the clinic without fulfilling the mother's request, but this appeared to illustrate a consensus about the importance of weighing, even when the result was clearly only approximate and the child was highly distressed. I do not know if, had I been in the clinic in another capacity, I might have suggested leaving the weight on this occasion, but I certainly felt very uncomfortable at giving silent assent to inflicting this unpleasant experience on the girl.

Health Visitors in the Clinic

One health visitor attended each weekly session. At the time I began observations, a newly appointed health visitor was expected to take up her post, and her duties included regularly covering this session. Until she arrived, the other three held the clinic on a rota, and did again when she was away (on holiday, at a training event or on sick leave). Thus I had the chance to observe all four health visitors in the clinic on at least several occasions. Some days clinic sessions were very busy. Sometimes there was a steady stream of women, with a bit of overlap while one was waiting for another to finish with the health visitor, with perhaps a previous mother finishing dressing her child. (One day 14 women came during the 90-minute session.) Women might have to wait their turn, and on a few occasions several women waited. At other times there were gaps between visits. Then, health visitors might go into the back room to make phone calls, or we might have a chance to chat, perhaps even have a cup of tea.

These gaps gave me a chance to discuss things that had happened in encounters or ask about aspects of health visitors' work and were valuable in helping me build a fuller picture of the clinic. I particularly came to value these opportunities, as my study design meant that I would not be speaking to the health visitors at length in phase two.

Health visitors are nurses who have additional training for their role. Many of them have been midwives. Unlike many other nurses or midwives, they do not wear uniform, and, in this clinic (probably the whole authority), they do not wear badges. In fact, I was the only person to wear a badge, as I had a 'visitor' badge from the Health Authority⁸⁸. A newcomer to the clinic might be forgiven for not knowing whom to approach for information.

⁸⁸ They did not request for me to have a photo card.

The impression from observations was that mothers assumed that there were norms of baby behaviour and being, such as frequency of feeding, contentment, weight gain, and sleep times. They expected to access help from health visitors with attaining the desired norms from their baby so that the experience of the baby both physically and behaviourally followed a normal pattern. The health visitors responded by providing information on norms and how to attain desired behaviours.

Other Clinics

Throughout the study health visitors made explicit comparisons between this clinic and others where they were working, or had worked in the past. Remarks like 'we don't have quiet times like this in such-and-such a clinic' may have been made partially in apology, when they perceived I had made the journey to observe a clinic session and was not obtaining much data⁸⁹. If I asked about particular aspects, for example social interaction between mothers, they might cite what happened elsewhere as providing instances that were not evident in this clinic. It also appeared that if I did not come on a particular week (for example when I was on holiday), that week at either the clinic or at the breastfeeding group was reported to have had a high number of visits by breastfeeding women. This may have reflected a reality in which I missed some particularly busy sessions, or a perception on their part.

At times mothers spoke about their experiences with other clinics. Several women at the breastfeeding group travelled from different areas of the town and attended other clinics for routine weighing. In phase two some of the women attended other clinics in the same general geographical area. One of the mothers in phase two was herself a health visitor in the same authority, and she spoke about the clinic she worked in as well as the one she attended for routine weighing. One mother had moved from the south of England, where she had had her first baby, and explicitly contrasted the two clinics in interviews.

During the period of clinic fieldwork, I visited my own doctor's surgery (in a different authority) and noticed the baby clinic through an open door. Although some elements were different (a dial scale, rather than an electronic one, placed in direct line of sight of the door, for example) the whole setting had a familiar aspect to it.

There was thus continual comparison of this particular clinic situation with others. Details of the layout of this clinic may be unique and there is no doubt variety in the way clinics are set up

⁸⁹ This would not necessarily be my perception.

across the country; even in who is responsible for noting the weight on the scale⁹⁰. This account pertains to this particular clinic. At the same time, it may describe practices or attitudes which are found elsewhere.

Seeking Social Interaction?

Seeking social interaction is one reason women attend clinics (Sefi & MacFarlane, 1985). All four health visitors mentioned that clinic visits provide a chance for mothers to get out of the house and to have social interaction with other adults. I was told of sessions in another clinic staffed by two health visitors where more women attended, which increased the chances of social interaction. I was told of one clinic in which there was a circle of chairs for mothers to sit in before and after weighing, increasing social interaction. This type of interaction was not the focus of my study; I observed little interaction between women in regular clinic sessions⁹¹. In my first month of observation, Bethany and Anne met for the first time since their babies were born (they knew one another from aqua-natal classes). I noted the conversation I overheard, in which they compared how their babies were sleeping and feeding. This was the only time I witnessed a meeting between two breastfeeding women in the clinic.

Observing Breastfeeding Women in the Clinic

At times during clinic observations I experienced frustration at the low numbers of breastfeeding mothers. Although this part of the town had a higher number of breastfeeding mothers than other parts, the majority of mothers visiting the clinic were not breastfeeding, and there might only be one or two breastfeeding mothers attending in each session. As noted, the local area had breastfeeding initiation rates lower than the regional average. Assuming an attrition rate similar to the national one (Hamlyn et al., 2002), 35% of local mothers of six-week old babies could be expected to be breastfeeding. Women first attended clinic no earlier than about four weeks. A study recruiting women in another way might have allowed me to spend more of my field time observing breastfeeding women. However, conducting observations in the clinic mirrored the experience of breastfeeding mothers, who might go to clinic to find they met only bottlefeeding mothers. In practical terms this meant that a woman would probably need to attend the breastfeeding group to share her experiences with another mother, and may explain why some women attended this group regularly.

⁹⁰ During discussions with colleagues in the BfN, I have had reports of clinics where nursery nurses, clinic receptionists, and volunteers conduct the weighing, and women then discuss any issues with health visitors.

⁹¹ In contrast to the breastfeeding support group.

It was interesting to note how clinic encounters were similar for breastfeeding and bottlefeeding mothers. The weighing ritual did not seem to differ. It was the content of the discussion after the weight was plotted that varied. Breastfeeding was treated as simply one possible milk delivery system. There are few qualitative studies of the experiences of bottlefeeding women, and their experience of weighing their babies has not been explored.

During regular sessions, I never saw a mother actually breastfeeding in the clinic. Once or twice in interviews, in a separate room, a mother did breastfeed her baby while I was speaking to her

The Back Room

As noted above, mothers attending walk through the building doors, down a corridor into the main waiting room and enter the clinic through a door on the right. On the right immediately after the main doors, was a short corridor with several small clinical rooms. This then turned left and there was a door directly into the health visitors' office. I was invited to use this door, and did so, although I could only go in this way if a health visitor was in the office, as it was kept locked. The clinical rooms were ones I was offered for interviewing mothers, and also for the taped health visitor interviews. I also conducted two interviews in the corridor when no room was available.

The office was a large room, accommodating five desks – one for each health visitor and one for the nursery nurse who worked with them⁹². Filing cabinets and a fridge were slotted in between the desks, and all surfaces were covered with a layer of clutter. On one wall was a white board, on which reminders were written. I saw notes of individual health visitor's holiday dates or training days, and also dates of visits of representatives from formula milk manufacturers. There were three doors; the door to the clinic, one to the corridor and one to a storage room. Here were piles of leaflets, copies of the PCHR, a number of portable weighing scales in their carrying cases and some books.

On my first visit, I arrived before the clinic started, and I was offered the seat at the nursery nurse's desk and sat there most of the times I was in the office.

During early observations, I was very aware that the atmosphere in the office was different from that in the clinic⁹³. This was the health visitors' base. As well as working (making phone calls, writing notes) they ate their lunch and made personal phone calls here. I saw a contrast

⁹² I only met the nursery nurse once or twice as she worked elsewhere on the days I regularly attended.

⁹³ This came to seem normal after a while. And I think my presence came to seem normal to them.

between how the health visitors presented themselves in the clinic to mothers and how they were when they were together in the office. They appeared more relaxed and appeared to feel free, for instance, to express exasperation with other professionals (such as a particular doctor or midwives at the hospital) which would not be voiced to women. They also spent time chatting with one another about personal things. This appeared to help build a feeling of being in a team.

Health visitors were also able to use time in the office to consult with one another in order to share information, including about breastfeeding. Liz several times commented to me when we were alone on how different colleagues had different levels of experience with breastfeeding information and that discussion in the office could support them in their contact with a mother.

Company Logos

On early office visits I was struck by the presence of items with company logos on them, particularly companies which sell breast milk substitutes. Formula supplements may be medically indicated for some individual babies, but the marketing of products – as opposed to the provision of scientific information about their composition – has been the subject of criticism. WHO and UNICEF (1981) state that “the vulnerability of infants [...] makes usual marketing practices unsuitable” (p12).

At my first visit I noted a desk blotter and some mugs in the office, and a calendar in the clinic itself. At my next visit the calendar was gone (I never discussed this with the health visitors). In the office I noted at least four different types of ‘stick-it’ note pads at different times, all advertising different breast milk substitutes; there were also often company pens. A stack of samples of a special formula appeared about half way through my study. A fieldnote from December reads “I realised that the little boxes on the desks I saw for the last two weeks with SMA⁹⁴ ducks and logos on were not little samples, but boxes of tissues”. One health visitor (Tina) had a Cow & Gate ‘storage box’ on her desk, which she used for paperclips. On my first visit, there were no mothers for the first 20 minutes, and Mandy suggested that we make a cup of tea. All the mugs were dirty so I offered to help her wash them up. A fieldnote for this day reads: “I am drinking tea, out of an SMA mug: I have ‘gone native’!”

I never saw a mother enter the office, so they would not have seen these particular logos (and they were unlikely to be able to see through the door). However, the ‘weeks

⁹⁴ I use the actual companies involved. Partly this is to show that there were logos from several companies, and also as part of an accurate description.

wheel'⁹⁵ which was on the table near the scale had a company logo on it. In the summer a display appeared on the clinic wall which included leaflets produced by a formula company. I noted:

Liz says 'we need more leaflets, but, like so many things, they are from companies. This one is from SMA.' Tina says 'I need to contact SMA before the rep comes because they do diary covers....' Liz replies: 'I am going to the conference [CPHVA] and I will get one there, not a milk company one' (1:f).

There thus appeared to be some tension between different health visitors over whether it was acceptable to have logos on equipment. An identified problem was that there was no ready source of alternatives (Halnan, 1998).

Several other types of logo-emblazoned items did appear where mothers would see them. Health visitors might bring their diary through when arranging to visit a mother, and probably this would be evident on home visits. The mugs in use were a motley collection, many having milk company logos. If the health visitor and I had a cup of tea, it might be in one of these mugs, and they were also used for the mothers in the breastfeeding support group.

I did not open discussions on this issue with the health visitors. I felt that, should I comment, this could make questioning on other aspects of their actions more difficult. They were aware that this was a contentious issue⁹⁶, as illustrated in a fieldnote from my first visit to the breastfeeding support group:

Liz came in with tea. Gave me a mug [mug says 'The Boss'] saying 'that'll make you happy'. Then she showed me another mug with Cow & Gate and said 'This isn't too good is it?' She said 'because you are coming, Magda, it made me notice them again' (BG: f)⁹⁷.

The Breastfeeding Support Group

This group was started some years previously by a health visitor who was no longer there and was now looked after by Liz⁹⁸. It was, at the outset of the study, the only breastfeeding support group in the area, although when I returned to the clinic to discuss recruitment for phase two, I learned that a group had been set up at the hospital, run by midwives. My main focus was not on the running or effectiveness of the group, but the opportunity it provided to see and hear

⁹⁵ This is a device for calculating age in weeks from a set date.

⁹⁶ And one I do have views about – see Sachs (2003).

⁹⁷ This incident reminded me of Kirkham's (1989) report that she was introduced by one midwife in her ethnography of labour "You've heard of big brother, well, this is big sister" (p119).

⁹⁸ Thus the structure of the group was 'inherited'.

breastfeeding women in this area and listen to any talk about weighing. Interaction over the time of the group provided more opportunity to listen to women and health visitors interact, and mothers interact with one another than the often brief encounters in the clinic.

Women received a flyer from the hospital and the group was explicitly open to all in the authority. Liz told me that she had not received any dedicated training for running the group, although group facilitation skills were part of initial training. She also received no specific paid time for this role. Mandy noted that other health visitors in the authority would refer women to the group if they had a breastfeeding problem that they were unable to help them solve “and hope we – well Liz – will sort them out” (1:f).

A focus on problem-solving could conflict slightly with the group as a forum for women to provide one another with support. Liz noted that “there are issues, we have to be sensitive about... when someone is struggling... they don’t want to have a go while they are in front of the group” (1:f). In fact, women discussed problems they were experiencing with breastfeeding, sometimes openly among all present and sometimes more privately with Liz. No one was asked to ‘have a go’ in order to be helped, and there was a marked lack of attention or discussion of the physical skills of breastfeeding, an issue I further discuss in chapter 7.

Sessions were an hour long. Two large mats would be placed on the floor so that babies could be laid on them, and mothers could kneel by them or sit on the chairs. Sessions I observed had between two and six mothers attending – it would be hard to imagine the small room coping with many more mothers and babies, a health visitor and a participant observer. During sessions, the door between the clinic room and the surgery waiting room was kept closed.

Women arrived, were greeted or greeted each other, and began to chat. The health visitor would offer tea after the first 20 minutes or so. Weighing the baby during the session was common. Often women took the opportunity to weigh when they had to change a nappy; at other times they intended to weigh the baby at some point during the session and would strip the baby even if no nappy change was needed. Sometimes they asked the health visitor to come and read the scale and enter the weight in the book. At other times mothers might weigh the baby themselves (as I noted above).

Women appeared to be comfortable breastfeeding in this environment and I often actually observed breastfeeding during group sessions. This might be the one local place where breastfeeding outside the home could expect to be uncontested. When I began observations, there was a delay before I was able to go to the breastfeeding group, because Liz wanted to be

able to present my study to mothers who attended and discuss it with them without me being there. This level of protectiveness may have been due to the fact that the group was 'hers', but may also be due to a feeling that women might want privacy for breastfeeding. This special status for the physical act of breastfeeding may reflect the marginality of breastfeeding even within the clinic.

I also observed a number of women offering their babies bottles of formula milk in group sessions⁹⁹. Partly this was due to the presence in the group of women who had stopped breastfeeding but still came for support. It was striking that, if the group represented the one place where breastfeeding women could be sure of being able to breastfeed, bottlefeeding was not absent. One unintended outcome of my presence as researcher was that Liz became very conscious of the attendance of these women¹⁰⁰, and, after discussion with colleagues, announced to the group that there would be another general postnatal session, with the breastfeeding group restricted to breastfeeding women. Liz expressed nervousness about this to me, but it seemed to be accepted by the mothers, and it was not clear whether they related this to my arrival. I was invited to and attended the pub lunch farewell for those who then left the group.

I attended the group to increase my chances of observing discussions of weighing babies. These sessions were invaluable as they brought together a number of mothers whereas I observed only one interaction between two breastfeeding women in clinic sessions. It seems clear that such groups could provide fertile ground for future ethnographic study.

Phase Two: An Ethnographic Description of Breastfeeding in a Northwest Town

The setting for phase two was more diffuse, covering the homes of the women involved, and I offer a briefer description. This is partly because my own attention was focussed on interviews and spoken interactions, and also because it is less obvious what might be useful to observe in this phase of the study.

As described in chapter 4, I recruited 14 mothers for interviews in phase two of the study. Seven of these were first time mothers, the other seven had one other child¹⁰¹. These women represented a variety of views on, and degrees of commitment to, breastfeeding. At two weeks,

⁹⁹ In fact, one of the ways I participated was that I fetched hot water in a jug to warm bottles during several sessions.

¹⁰⁰ I had not commented about this to her. Indeed, from my own days of involvement with a breastfeeding support group, I recognise the dilemma between supporting individual women and creating a group atmosphere which puts priority on breastfeeding.

¹⁰¹ Two of these had had another baby, one who died soon after birth, the other who died when a few days old.

80% of babies breastfed initially are still being breastfed, and 65% are still breastfed by six weeks (Hamlyn et al., 2002). Thus these women who were still breastfeeding by the time of the first health visitor visit represent women for whom breastfeeding was at least initially successful. A table giving information on the mothers in phase two of the study is on the next page. The age of the baby at each interview, the approximate time of introduction of formula and of stopping breastfeeding is noted, along with some details of her breastfeeding experience.

The Place

All interviews were conducted in women's own homes. These were all located within five miles of the clinic; some on new estates, others in older Victorian stone houses, others in council properties, including one in what the health visitor described to me as a 'sink estate'. Upon driving up the road, it was often easy to spot the correct house on the first visit as a row of congratulations cards would be visible in the window. Many, particularly first-time mothers, had newly decorated front rooms, and, in interviews indicated that they had used their maternity leave to get the house ready. This emphasised how childbirth, particularly of a first baby, is a pivotal life event around which other events are planned. On subsequent visits I noted pristine front rooms filling up with baby toys and baby photographs edging wedding pictures out of prominent spots.

Table I: Women Interviewed in Phase Two

Name = pseudonym	first/ second baby	Baby age 1 st interview	2 nd interview	3 rd interview	Age formula	Other information
Zoë	first	four months	six months	/	n/a	Zoë's baby was readmitted to hospital at 15 days due to dramatic weight loss. Zoë gave expressed breast milk and did not supplement in response to this. She was happy that her baby was growing along the 50 th centile, as, being heavy herself she wondered if her milk might be too fattening. She decided not to return to work, and was still breastfeeding at six months.
Nadine	second	six weeks	eleven weeks	seventeen weeks	By six weeks	I saw Nadine in phase one with her first baby, aged 15 months when the second was born. This baby always gained weight and was on a high centile. Nadine introduced the bottle for the baby to get used to it, and increased the number of bottles because 'he needed more'. Nadine expected, from her previous experience, not to be able to continue breastfeeding when she returned to work at four months. I saw her just prior to this return.
Alex	first	fifteen days	eight weeks	/	four weeks	Alex felt the 10 day wait for the first weighing after birth was too long. The baby gained well, but this did not reassure her. She weaned due to lack of sleep and frequent feeding – she felt bottle-feeding was much better, but was glad to have breastfed. She felt confused by the growth chart.
Wendy	second	three weeks	eleven weeks	six months	n/a	Wendy had breastfed her older daughter for three weeks, but had stopped due to mastitis with no resolution. The first weight of this baby from the health visitor was very important as it established for Wendy that she was doing well. The baby was only weighed twice more in first six months, when Wendy was still breastfeeding, having exceeded her initial breastfeeding expectations.
Val	first	three weeks	eight weeks	/	five weeks	Val was pleased at her success in getting breastfeeding started, and proud that her son was putting on more weight than his bottle-fed cousin. Val developed severe pain due to thrush of the nipple and weaned abruptly. She felt it had been positive overall.
Una	first	three weeks	eight weeks	four months	n/a	Una initially intended to breastfeed until her return to work at four months. From about eight weeks she started expressing, which she found very easy; she used the milk she expressed to manage times when visitors were in the house and also to arrange regular exercise sessions away from the baby. Since she found expressing so successful, she intended to continue combining expressed milk with breastfeeding on her return to work.
Jayne	first	four weeks	fourteen weeks	six-and-a-half months	five months	Jayne felt the first health visitor weight was very important, and found her baby had gained satisfactorily. He continued to do so. She attended the breastfeeding group and weighed her son weekly there. Her perception was that weighing had not been much of an issue because her baby had gained consistently.
Tessa	second	six weeks	fourteen weeks	six months	n/a	Tessa had had great difficulties with her first child, who had not gained weight well in the second half of her first year. She breastfed for two years. She decided when pregnant not to weigh this baby, and to breastfeed exclusively until six months. She did have the baby weighed a few times in the first six months, but did not attend the clinic regularly. She had just introduced first tastes of solids at six months and was still breastfeeding.

Sarah	second	eight weeks	twenty weeks		Before second interview	Sarah is herself a health visitor in the same authority where the study was conducted. She weighed her daughter weekly on her own scales, attending the clinic only a few times. Her daughter was steady on a low centile, which was a similar pattern to her previous child. She felt weekly weighing was very important to her. Sarah also attended the breastfeeding support group.
Rosemary	first	five weeks	sixteen weeks	six months	n/a	Rosemary felt weighing was very important for herself and her husband in the early days, but less so as time went on. The baby gained steadily, except at one point when she had a cold. Rosemary attended the breastfeeding group and weighed weekly. She felt she increasingly understood the chart and used this rather than pounds and ounces in her understanding of how her daughter was doing. By the third interview Rosemary was expecting to return to work soon and to introduce formula.
Kelly	second	twelve weeks	five months		n/a	Kelly described great worry over weight with her first son, describing a plunge at four months 'into the blue zone'. She responded by giving formula supplements and then stopping breastfeeding completely. This baby gained well but was showing some signs of 'dipping' which concerned Kelly, but this time she was introducing solids to keep the weight up. Changes in her older son's eating helped reduce the anxiety she felt about the younger baby's weight
Paula	first	five weeks	fourteen weeks		By ten weeks	Paula's sister had a second baby a few weeks older than Paula's and was breastfeeding. The two of them attended a breastfeeding support group in a near-by health authority. Paula was confused by the pattern of weights recorded on the chart in the early weeks, but increasingly found it useful. She breastfed longer than she had thought she might. She felt she would probably have to wean to go back to work, and did so, despite changing her career path in order to spend more time with her son.
Olivia	second	three weeks	thirteen weeks	six months	n/a	Olivia reported having a crisis in the early days with her first baby, but received skilled help from a specialist breastfeeding centre [in another part of the country] and continued breastfeeding for two years. Her first baby was weighed weekly. The early weights were important to Olivia with this baby, but he was visibly putting on weight, and she ceased to go to the clinic. She found it awkward to go and also felt the health visitor was undermining her confidence and introduced the idea that she would have to offer solids early with such a large baby. She was still exclusively breastfeeding at the 6 month interview.
Marie	second	twelve weeks	four months		three months	Marie had breastfed her first baby for three months and stopped to go back to work. She had given her first son a supplementary bottle from early on and she wondered if she should have done so again as this baby was very resistant to taking a bottle up to the day before she again returned to work. She would have liked to go to the clinic every fortnight but sometimes went less often as she was busy. The baby gave no cause for concern with his weight but 'if you don't know what your baby weighs, people think you're a bad mother'.

A diagonal line at third interview indicates that this woman was only interviewed twice.

'N/a' in the 'age formula' column indicates that the baby had not been given this at the time of the last interview.

Although the home is the main site for the actual practice of breastfeeding, little attention has been paid to conditions within it which might facilitate or hinder breastfeeding (Carter, 1995). Carter (1995) found women who had breastfed in the preceding 20 years in a Northeast town needed to negotiate space for breastfeeding with other family members, within their own home. It may be that the women who agreed to interviews were ones who felt confident about being able to breastfeed in their homes. In contrast with phase one, women often breastfed their babies during phase two interviews. Indeed, I observed breastfeeding, bottlefeeding and feeding of solids. Una was the only woman to ask me if I minded if she breastfed her baby while I was there¹⁰². It turned out that her husband had strong feelings about her feeding in front of people, which she managed at first by often going upstairs to breastfeed, and later, by expressing and offering a bottle when others were present or she was out.

All of the women in phase two had a space into which they could invite me. Most women appeared to have mentioned their participation in the study to their family. On several occasions a partner was present when I arrived at the house; Zoë's chatted to me as we waited for her to arrive home, Rosemary's came through the room and made a few remarks. Wendy's eight-year old daughter stayed throughout the first interview and contributed her thoughts (as well as playing with the baby and making Christmas cards). Marie's mother played with her toddler in the garden, while Kelly's son provided noisy accompaniment to our second interview. Other women with toddlers explicitly arranged times when their older child was occupied.

Women usually offered me a drink, and Zoë and I shared a snack lunch at her second interview. At second and third interviews women welcomed me back sometimes recalling what had happened on previous occasions. It thus felt as if the interviews were incorporated into more usual modes of social exchange.

Breastfeeding Community?

Although my focus was not on feeding in front of others or about breastfeeding in public places, this was brought up by most of the participants during general conversation about how breastfeeding was going. A number of researchers have noted the amount of concern this issue causes women (Murphy, 1999; Stearns, 1999; Pain et al., 2001; Scott et al., 2003), and it remains one of the perceived barriers to breastfeeding. That interviews in homes, with a focus on weighing, should consistently bring forth this theme reinforced the sense in which women

¹⁰² This took me by surprise; after years of visiting women with the intention of observing breastfeeding, it seemed natural to me that women would feed when the baby needed it.

felt a communal eye focussed on their breastfeeding behaviour. In approaching the interviews I attempted to create an atmosphere of private discussion, rather than official scrutiny. I was conscious that this felt easier to me with certain women than others, so that my own presence may have felt allied to biomedical scrutiny of their mothering practices.

Breastfeeding: Why and How Long

These women chose to breastfeed because they thought it was important. They felt it would help them bond with their babies, give the baby the right nutrients and immunity. They had heard it was best. Some of them just wanted to. But they were mostly clear that they had not invested too much in breastfeeding – they would ‘give it a go’ (Sheehan et al., 2003; Bailey et al., 2004)¹⁰³. Often those who were still breastfeeding said at later interviews that they had kept an open mind about stopping. At the time of the first interview most expressed satisfaction with breastfeeding, despite the realities and fatigue of the early weeks.

Five women in this sample did not continue breastfeeding to six months. Two stopped because of problems before they intended. Nadine had almost stopped by four months; she had expected to do this as she had changed over to a bottle around the same stage with her previous child to go back to work. Marie also followed a similar pattern to that of her first child, stopping when she returned to work, and Paula also stopped between three and four months saying “to be honest its longer than I thought I would” (2:2). Val said, about seeing something on TV about breastfeeding, “I thought “I’ve done that!”” (2:2). Alex stopped breastfeeding due to a combination of fatigue, frequent feeding and postnatal depression, but said that she would still breastfeed a future baby. Una had originally stated her intention to breastfeed only for four months, but revised her expectations upward. Interview dates had been adjusted and the last interview conducted early (at four not six months), at which time she was still breastfeeding and had decided that she would not stop when she returned to work.

At the third visit Rosemary and Una were still breastfeeding alongside giving complimentary solids, while Nadine was also giving formula. These women were intending or expecting to stop breastfeeding gradually over the next few months. Three (Sarah, Wendy, and Zoë) stated their intention to breastfeed for a year and two (Olivia and Tessa) intended to continue for two years. Sarah, Olivia and Tessa had set the goal so that they would have breastfed as long as with their previous baby. With 34% of women who start breastfeeding, continuing to six

¹⁰³ While the authors cited above note that the phrase ‘give it a go’ indicates women’s lack of confidence that they will be able to breastfeed, the Department of Health has used it as part of their exhortation to women during National Breastfeeding Awareness week, 2005 (Carson, 2005).

months and 19% to nine months¹⁰⁴ (Hamlyn et al., 2002), these women clearly represent a minority who have the most faith in and experience of breastfeeding. These women were generally the most definite about their desire to breastfeed at the first interview. However they also expressed concerns about attaining their breastfeeding goals, Tessa for example talking about how she planned to restrict the use of water and juice so that her child would continue to breastfeed often enough to keep up her supply. Olivia was reluctant to interfere with her son's still frequent night feeds as this might have a negative impact on breastfeeding. When they voiced their goals they qualified them with 'if I can'. For these women who had established breastfeeding, it was notable that there were still fears that the system might not be robust enough to sustain itself.

Weighing Frequency

Of the seven first time mothers, five weighed every week during the early months, once they started attending the clinic. One of the other two weighed once a fortnight, the other every two or three weeks. Of the second-time mothers one weighed weekly, two fortnightly and one 'every few weeks'. The remaining three weighed infrequently and are discussed in the section below. This pattern of frequent weighing was similar to the pattern reported by women in phase one of the study, and is much more frequent than Hall and Elliman (2003) recommend to practitioners. I will discuss in greater detail the reasons women gave for taking their babies to be weighed and factors which increased or decreased the frequency in chapter 8; here I only note that weighing was a common, taken-for-granted practice of early motherhood for these women.

Women Who did not Weigh Regularly

A limitation of my observations in the baby clinic is that breastfeeding mothers who were reliant on frequent visits to the "medical space" (Mahon-Daly & Andrews, 2002 p 67) may have been over-represented. In phase two, I sought to include women who had varying attitudes and who might not have their babies weighed frequently, as a form of 'discrepant case' sampling (Strauss & Corbin, 1998). Three women did not weight often, and the interview data from these mothers added richness to the analysis. One (Tessa) was asked to participate by one of the health visitors specifically because she had decided during her pregnancy that she would not seek regular weighing, and had discussed this with her health visitor. The other two, Olivia and Wendy, had not expressed this intent in advance.

¹⁰⁴ The statistics are not collected beyond this point.

Olivia told me that she had had her first son weighed weekly – this was partly due to a medical condition which restricted her mobility and led to the health visitor coming weekly to her house. This time, her physical mobility was much better and although she had had good experiences of weighing before, this time she found attending the clinic inconvenient. She could also see that her son was gaining weight.

Both Olivia and Tessa were middle-class. They were members of the National Childbirth Trust and Tessa was a lecturer. In contrast, Wendy lived in a council house in a deprived area. She told me that her local clinic¹⁰⁵ had curtailed regular sessions because of poor attendance. However, once the all-important first weight at home had showed her that her daughter had gained above her birth weight, she did not feel the need to weigh her baby.

Conclusion

I have provided a description of the setting of the baby clinic and an overview of the environment of the women in phase two. This description of the physical setting and interactions about infant feeding and weighing helps to ground understanding of how the setting influences women's decisions and actions. I hope, too, that this helps provide the context for my analysis of issues in subsequent chapters.

Ethnography explores the contexts in which individuals make decisions through interactions with circumstances and with others. This portrait should also allow readers to compare their local situations with the one I observed and to note both similarities and differences. While details of clinic lay-out and procedure are likely to vary, this may or may not affect some of the core observations and analyses I offer.

In the next chapter I explore the data I gathered and give a typology of reasons women gave for attending clinic to have their baby weighed. This is followed, in chapter 7, by an examination of the relationship between health visitors and breastfeeding mothers. In chapter 8, I analyse the way women and health visitors read and understood weights plotted on the growth chart and in chapter 9 I give a more detailed analysis of the changes in feeding women undertook if they felt the weight gain was not good enough. In chapter 10 I return to the weighing ritual and analyse this as a rite of passage through the early postnatal months. Chapter 11 widens out to

¹⁰⁵ Wendy had moved to this area – which the health visitor who phoned me about her willingness to participate described as a 'sink estate' – just after the birth of her baby, but originally remained with her previous GP. Health visitors are attached to particular GP practices, so she remained under the care of the health visitors whose clinic I observed until she changed her registration. She was one of the women recruited by the enthusiastic student health visitor.

consider breastfeeding itself as a liminal, transitional time, with conclusions given in chapter 12.

Chapter 6: WEIGHING IT UP – REASONS FOR WEIGHING BABIES IN A UK CLINIC

“Bringing the baby to be weighed is the focus for the baby clinic. Parents can visit with no other ostensible reason than to weigh the baby. This alone validates the visit while enabling the mother or father to make use of a contact with the health visitor” (Daws, 1985, p79).

Weighing babies is one of the jobs of the baby clinic, perhaps the job most associated with clinic in the minds of new parents. Women in the UK often come more frequently for weighing than is recommended, but the motivations for doing so have not been analysed in depth. In this chapter I present the reasons women in my study gave for bringing the baby to be weighed. Before conducting the analysis, the variety of different urges which bring women into the clinic had not been apparent: weighing the baby seemed something of a self-evident aim. However, as I demonstrate, different weighing episodes could be undertaken for different reasons by the same woman, while different women had differing ideas of how often and why they should weigh their babies. In creating this “domain analysis” (Spradley, 1980, p85), I hope to illuminate the meaning weighing had for these mothers, and to show the power that the weight of the baby had in shaping their experience of the early months of motherhood and breastfeeding.

As noted in chapter 2, women attend for weighing more frequently than medically suggested. The reasons women in this study gave for weighing are wide-ranging, demonstrating a variety of needs that weighing is felt to satisfy. If weighing is to be less frequent with more attention paid to each recorded weight (Wright, 2000), documenting these reasons for weighing could pave the way for devising other means of satisfying these needs.

Frequency of Clinic Visiting and Weighing

The suggested frequency of routine weighing¹⁰⁶ is five weights (after the birth weight) in the first nine months at the times of particular checks and immunisations, but women often attend much more frequently (Hamlyn et al., 2002; Hall & Elliman, 2003). Frequent weighing amplifies small variations in the rate of growth. In the clinic, the official frequency was not adhered to by most mothers nor was it suggested to women.

¹⁰⁶ Obviously if there is a cause for concern because of a medical condition or a previous weight problem, there will be a period of time when the baby is subject to a weighing regime which is not routine.

As I described in chapter 5, weighing is at the nub of clinic encounters between health visitors and mothers, with very few encounters not involving weighing. Surveys show weighing is the reason women most frequently give for attending clinics (Biswas & Sands, 1984; Sefi & MacFarlane, 1985; Gastrell, 1986; Sharpe and Lowenthal, 1992). I found no previous study which explored the reasons women have for bringing their babies to be weighed: it appears to be assumed that each weighing encounter is undertaken for the same reasons. I identify six categories of reasons for weighing. Each category has two aspects, one which provides rationales which increase the frequency of weighing, and a reverse which increases the interval between weighing episodes. A brief description of these categories is provided in tables II and III. I then give examples of each category and its reverse, using data from women in my study.

Table II: Reasons to Weigh

Medical weighing	<ul style="list-style-type: none"> • Mother or baby ill • Part of medical follow-up for previous problem • Weight at immunisation appointments [set weighing times] • Consistency of scales for best medical information
Portal weighing	<ul style="list-style-type: none"> • Want to ask another question of HV • Going to clinic for social reasons • Going to breastfeeding support group/massage class • Weight at immunisations – may seem to mother like portal weighing?
Recreational weighing	<ul style="list-style-type: none"> • Going to group/class, scale there, want to check • ‘Curiosity’
Accountability weighing	<ul style="list-style-type: none"> • To report to family, friends • Confidence to continue breastfeeding in face suggestions to give a bottle • See baby is getting ‘enough’
Keepsake weighing	<ul style="list-style-type: none"> • To have a full record on the chart
Grocer’s weighing	<ul style="list-style-type: none"> • To see whether products (nappy wraps, slings), which give a weight range for use, are still suitable for the baby – or to forecast future suitability

Table III: Reasons given for Decreased Frequency of Weighing

Reverse medical	<ul style="list-style-type: none"> • Want to see overall trend, not fluctuations
Reverse accountability	<ul style="list-style-type: none"> • Embarrassment because gains are large • Reassured that behaviour is normal, not due to lack of milk, therefore weighing not seen as appropriate reassurance • Can see the baby is growing
Reverse portal	<ul style="list-style-type: none"> • Clinic offers poor quality encounter • Feel weighing can become too much of a focus
Reverse recreational	<ul style="list-style-type: none"> • Baby finds it stressful being undressed • Getting to the clinic is difficult • Difficult to find time to go to clinic • Hard to go if back at work
Reverse keepsake	<ul style="list-style-type: none"> • Weighing less frequently means each gain is larger • Feel it can become too much of a focus
Reverse Grocer's weighing	No reverse grocer's weighing identified for women in this study¹⁰⁷

Two important aspects of weighing frequency which do not appear in these tables, are that the frequency for each mother-baby pair declined with time (although for many, weekly weighing continued until they returned to work at about six months), and that women with second babies tended to weigh less frequently, both than mothers with first babies and, reportedly, than they had done with their own first babies¹⁰⁸.

Reasons to Weigh

Medical and Reverse Medical Weighing

As noted in chapter 2, an important rationale for routine weighing is to detect any problem, as Liz reminded me:

Occasionally you get a baby with a medical condition...We have certainly had several babies here who haven't been diagnosed at birth, who've had serious heart conditions, and the fact of the matter is that they were apparently feeding quite well, but they hadn't put on weight (HV:i).

If a difficulty is detected, weighing may be frequent until the difficulty is overcome. Such weighing should not be categorised as routine, but be seen as part of more specific monitoring or assessment for such babies. A few women in this study reported instances in which their

¹⁰⁷ Later in the chapter I offer examples of reverse grocer's weighing from other cultural contexts.

¹⁰⁸ This is also my personal experience. Partly this may be explained by the increased difficulty of getting to the clinic with a baby and another child, and the increased stress of a weighing experience in which two children need to be managed. In the summer holidays I observed the clinic was noisier and more crowded, as many school-aged children were brought.

babies were subject to medical scrutiny resulting from earlier problems. Zoë's baby had lost 12 ounces at the first health visitor weighing. She reported:

She's also had follow up visits at the hospital from the jaundice, so she's been weighed then (2:1).

The mother of a formula-fed baby with a medical condition attended clinic weekly; her son was about eight months when I first saw them. On one occasion she came even though she had been to the hospital the previous day for a check-up. This suggests that an increase in weighing frequency due to a medical condition could sometimes lead to prolonged increases in weighing frequency, although this did not affect Zoë.

Sometimes when babies were ill, women attended the clinic in order to have them weighed. Kerri came in with her husband; their daughter, now on a weaning diet, had only had breast milk that morning and they were concerned. As well as checking her over and weighing her, the health visitor, Tina, explained how to tell if she were dehydrated. At her next visit Kerri told me that the baby had started behaving like herself later the same day. The weight was probably less important than the check-over on this occasion; indeed as this was the first day of illness, it is hard to imagine the weight already being affected.

Weight fluctuations might be explained retrospectively as due to minor illness. Linda's baby had only gained a little and she explained "He weren't so good last week.... He is all bunged up, he couldn't feed properly" (1:f). Rosemary told me that the only time her daughter had not gained was after she had been ill.

She had a bit of a dip there [on the chart] when ...she was poorly, she had a bit of a cold, she was quite sickly as well (2:3).

Mothers' illnesses might also be a consideration. Una explained:

This week, with me being ill, 'cos I had sickness and diarrhoea, I'd like to check that he's still ok. He does feel a lot heavier and he feels wider...So I think he has [gained weight], but I'd like to have it confirmed because I've been a bit off (2:1).

Olivia suffered from a debilitating condition after the birth of her first son, and had relied on regular visits from her health visitor, which included weekly weighing. With her current baby, she had only had a few weights and said; "My husband said I am more relaxed this time 'cos I don't have the same health issues for myself" (2:2).

Women did not seem to differentiate between times they went to the clinic for immunisations and had the baby weighed (which correspond to the suggested times for routine weights) and other occasions. At times, in the breastfeeding group, women who usually had their babies

weighed there might mention that they had been for an immunisation¹⁰⁹, had the baby weighed, and did not need to weigh again. However, I noted:

Liz (HV): “It’s up to you about weighing, but if he has to go to the doctor tomorrow [for immunisation], he’ll be weighed there.” While Liz is out of the room, Isla goes and weighs her baby (BG:f).

I did not ask Isla about this, so do not know if she wished to ensure that she had a weight on the scale she usually used, or whether (as she previously explained) her family would phone to find out about the weight, knowing it was her regular day. Sarah mentioned the issue of different scales:

I had her done at the breastfeeding group and she seemed to have put a lot of weight on and the following week, at the baby massage, they were offering to weigh her, so I had her done there and she put about an ounce and a half on, so clearly different-scales syndrome... I thought ‘ohhh, this is a minefield... different scales and they’re obviously not calibrated the same’ (2:2).

Sarah was herself a health visitor and might be more aware than most mothers of the possibility that scales vary. She weighed her baby on the scales she had from work for the first four months, but these were “repossessed” (2:3) for use by another health visitor, so she went elsewhere as described. Although her professional knowledge caused her to want to use the same scale, she did not conform to the weighing frequency suggested in the medical literature.

Tessa, who had made a deliberate decision not to have her baby weighed, explained this in terms of not being caught up in minor fluctuations, suggesting that a better assessment could be obtained by less frequent weighing.:

Because it’s a bit like, if, when people go on diets, they’re not supposed to weigh themselves too often. You know, wait until you might get a result (2:1).

Portal and Reverse Portal Weighing

This type of weighing appeared to happen as a matter of course when women entered the door, when their main aim for coming to the clinic was something else. As detailed in chapter 5, it was assumed that the baby would be weighed first, then other discussions take place. Olivia remarked; “In the baby clinic it is just that that is how you talk to the health visitor – over the baby while he is being weighed” (2:3). Some women in phase two described another, near-by, clinic in which babies were weighed by a nursery nurse, and only then did the mother proceed

¹⁰⁹ These were usually women who attended a different GP clinic.

to see the health visitor¹¹⁰. Women attending clinic for a social outing, or attending groups or classes might also weigh 'while I am here'.

Olwen: reported on the breastfeeding group; "Everybody tends to weigh them every week" (1:i). Jayne remarked:

I think that made it easy for me – to take Oliver to the [breastfeeding] group and just get him weighed there. If I had just taken him to the clinic I don't think I would have gone as often (2:3).

At the second interview, Una told me she was taking her son to be weighed every two weeks. At the third interview, she told me she was weighing him weekly, at baby massage class "cos we're there and he's stripped off and ready, you might as well." It seemed that being in the clinic with scales to hand could increase frequency.

Mandy felt weighing in the breastfeeding group was positive:

Because the scales are not the focus ...they can use them if they want to. And it's up to the mums to do it....I mean when I've been in, I've never weighed them. But mums have come and just gone ahead and used the scales if I've done the group ...and in a way that's better (HV:i).

Olwen, however, described the atmosphere in the breastfeeding group in quite a negative fashion:

Everybody always asked 'Oh how much have they put on this week?' It was like a sort of friendly 'oo good' or 'oh, don't worry, they'll make up for it next week'. It was more like a slimming club. You know, like where someone loses 'well done' and if you don't 'well never mind, I'm sure next week'. It was like that really, but the opposite way (1:i).

To some extent having scales at groups and classes might be used to manage uninviting clinics. However by leaving it up to women whether to weigh or not, health visitors are not taking responsibility for informing women about the useful frequency of weighing. A simple withdrawal of these weighing facilities might not reduce a focus on weighing. This would have to be parallel to other actions, such as including information in the PCHR. As the current content of the PCHR appears not to have been trialled with parents, it would be important to ensure that this is done for any changes made.

Weighing as part of the 'ticket price' for gaining admittance to the clinic was shown when Olivia took her son to see the health visitor about eczema and found that the baby was weighed

¹¹⁰ Unfortunately, I did not think to ask whether the health visitor or the nursery nurse plotted the weight on the chart. It would be of interest to examine exactly how the task of weighing is divided between individuals.

almost before she could say anything. Tessa (2) described one of the few times she had her daughter weighed:

That was a bit of an accident – 'cos I was going to drop off some stuff for NCT and it was absolutely accidentally on a Wednesday ... I was early, it was quarter to two and the midwives weren't there yet, so I saw I could be first, I wouldn't have to wait, so I did [have her weighed] (2:2).

Tina suggested mothers might use weighing as an acceptable excuse for asking about other concerns:

I think they use the weighing after a while as an excuse for other things....They come and they have them weighed and say 'well while I'm here'....they're not actually ringing, mithering me. They just happen to be in clinic and you've said 'how are you' so then they can you know, express their concerns. 'well actually...' (HV:i).

It was interesting that this was not mentioned by mothers.

The expectation that the baby will always be weighed adds to the frequency of weighing. I discuss in chapter 10 how each weighing episode continues to hold the potential to raise concern.

Recreational and Reverse Recreational Weighing

Women valued frequent weighing, but it seemed to be a routine act with little quality interpretation. Weighing as an act of passing through the portal was in many instances entwined with what I call recreational weighing. This was manifest in the aspect expressed above of doing it along with all the others because it was the thing to do.

Sometimes this was expressed as curiosity. Nadine said: "I just sort of not had him done for a bit so I thought I'd see how he was doing" (2:1). Bethany told me; "I'm just curious, me. It's like having her measured and everything, I just like to know what she's up to" (1:i). This rather devalues weight measurement as a medical test, and increases the focus on short-term fluctuations rather than longer-term trends, which might offer a better gauge of the baby's health.

Another aspect of this was speculation on the weight within families, with some mothers mentioning that they had a bet with their partner, or that other relatives would phone to ask the weight. This was related to weighing accountability, but also appeared to be a way of expressing interest. Una reported :

Everyone was very interested in the birth weight. Works had a sweepstake... they didn't ring up to see if it was a boy or a girl, just what it weighed. (2:1)

As in this example, such attention might actually sideline the baby, and also the mother and her feelings, by concentrating simply on a number. As Tina remarked:

I don't always necessarily think they [people who ask] give a monkey's what the baby weighs.... You know it's a conversation piece rather than for any actual beneficial reason. (HV:i)

Wendy, who had not had her baby weighed after the first health visitor visit, said: "I think having her weighed, it's just novelty value, isn't it, really, 'ooh she's put on another ... few pounds'" (2:2).

Things which made clinic visits unappealing, such as difficulties in getting there or parking, crowded clinics or hurried encounters, might lead to less frequent weighing since women went only when they had specific appointments (Sharpe & Lowenthal, 1992). Sarah, herself a health visitor, told me;

I think if the clinic ... was better I probably would go more often, but it's cattle market city down there....there are three different health visitors talking to three different mums, with three different babies crying, and you can't concentrate on what you're being asked, let alone have a conversation (2:1).

The experience of the baby might also impact. Nadine reported; "He doesn't like being weighed ... It's being in the pan, he's too big. He's hanging over the edge"¹¹¹ (2:3).

Keepsake and Reverse Keepsake Weighing

This type of weighing was the result of a desire for the end product of a well-filled-in chart. Marie said; "that's the main reason I like to get them weighed, is because I think that is such a nice keepsake" (2:1), and Rachel, when I asked her what she would say to a (hypothetical) pregnant friend about regular weighing replied "I would explain that if you didn't have them weighed often enough, you wouldn't see the curve that I've got" (2:3). I saw a mother come to clinic, requesting her daughter be weighed, "because she is six months old today" (1:f). I myself noticed the difference when Tessa showed me her charts for both daughters – one chart was frequently completed, the other had only two points plotted, giving a very different look.

Alex mentioned a reason not to weigh so frequently:

¹¹¹ Nadine's baby was four months old at this interview. The pan is used until the child is one year old, then a chair attachment is available. It is interesting to speculate on the role of the child's discomfort in the decreasing frequency of weighing with time.

I don't really see a big difference when you go every week.... It's just a couple of ounces. Whereas if I leave it every other week, I may see the big difference (2:2).

This appeared to be related to more immediate gratification (seeing a big gain) than to the production of a keepsake, but might produce a keepsake in the form of an anecdote ('and she gained x amount in x weeks!').

Jayne and Kelly each mentioned that they had their own infant weight records, which their mothers had given them¹¹². The keepsake impulse has been targeted by manufacturers of breast milk substitutes. I have acquired small folded weight record card with an advertisement for Lactogen on the front, with entries from 1932 and two cards from Cow and Gate dating from the 1960's.

Interestingly Olivia, who had not often weighed her baby, talked about the importance of her older son's PCHR.

With Jacob, the red book went everywhere and there were lots of notes from everyone...it had been a significant part of bringing Jacob up. (2:1)

But it appeared to be what was written, not the chart, that she valued

It was more the notes ...It was a good record to look back on. In David's there is nothing, just a few weights (2:3).

Perhaps the keepsake value of the PCHR could be preserved even if weights were less frequently recorded if other parts of the book are well filled-in.

Grocer's and Reverse Grocer's Weighing

Two women gave examples of this reason for weighing their breastfed baby. Tessa said:

These nappy outers that I use were saying up to 11 pounds and they were getting very small and I was thinking 'I wonder if she's about to need to go into the next size' (2:1).

The explanation signals the ubiquitous expectation that mothers in our society will know the weight of their babies and can use this for other purposes¹¹³. Rachel talked of a similar incident in which she forecast the weight of her baby to the time of a planned holiday:

We've got one of these Papooses¹¹⁴ ... we bought it with the intention of being able to use it at the airport. ...The girl in Mothercare said to us 'the problem with

¹¹² My mother recently presented me with my own baby record book. Such books are obviously intended as a keepsake (and I find that my own makes compulsive reading!). There is usually (if not always) a section for recording weight.

¹¹³ Aside from clothing, medication can be based on body weight, although this may relate more to older children.

¹¹⁴ A type of baby sling.

this one is that it only goes up to a certain pounds, and some babies at the age of one are this heavy and others aren't' ... I had a brainwave and I said 'I'll look at the chart because if I follow the line, it will tell me how heavy she'll be!' (2:3).

This illustrates the expectation that a weight will follow one particular centile on the chart, explored further in chapter 8.

During the early decades of the 20th century, mothers were recommended to conduct test weighing – weighing the baby before and after every feed. Liddiard (1933) suggests hiring scales or borrowing from tradesmen over a weekend, so grocer's scales may literally have been used (also Lancet, 1957). A contrast to this 'grocer-like' way of approaching baby care was noted by Abel (1986), who conducted interviews in Tamil Nadu to try and understand why local mothers avoided regular baby weighing. The women felt "that weighing is related to the sale of goods [...] they do not want to sell their children." (p45) This suggests that our conceptions of infant growth in both mechanical terms and as a commodity are grounded in a specific cultural understanding. This may be fostered by the widespread use of infant formula. When breastfeeding, a baby given access to the breast can regulate her or his own intake (Woolridge, 1995a, b), but formula-feeding mothers are instructed to judge the amount to give by the baby's weight: this has been the basis of calculations since the late 19th century (Wickes, 1952, 1953b). Many of the women in this study who were breastfeeding also used formula. Some had used it for previous babies. Some had been bottlefed themselves or had bottlefed siblings. It may be that decades of artificial feeding have entwined infant weighing and household shopping in their – and our – consciousness.

Although explicit resistance to grocer's weighing was not voiced by any of the women in this study, Wendy, who weighed infrequently, did turn the concept on its head, telling me "I haven't had her weighed [recently], I haven't got a clue, but she's in nappies to fit 18 to 40 pounds" (2:2). Those who weighed regularly might also mention this. Una said: "you can see him as his clothes change, get tight" (2:3).

Accountability and Reverse Accountability Weighing

This is the aspect of infant weight gain most often noted in discussions with breastfeeding women (Behague, 1993; Dykes & Williams, 1999; Murphy, 1999; Mahon-Daly & Andrews, 2002). By presenting it as the last of different types, I intentionally highlight the fact that this is not the only reason women came for weighing. Parents rear their children to be new members of their society and each cultural group has norms of child-rearing which it seeks to enforce – through custom, law and "informal techniques of social control" (Spradley, 1980, p152).

Members of society have an interest in how infants are raised and parents and carers are accountable. By having recorded baby weights, particularly if these conform to the centiles on the chart, UK mothers demonstrate that they are caring adequately for the physical need for infant growth. Even where the recorded weight is of some concern, mothers can demonstrate proper concern for monitoring growth by collecting the record (Olin Lauritzen & Sachs, 2001). All parents are expected to feel accountable, but the widespread lack of trust in the adequacy of breastfeeding may make the feeling particularly acute for breastfeeding mothers. Indeed, as I argue in chapter 11, while the period of milk-only feeding is a liminal phase in the life of a baby, breastfeeding women experience an intensified liminality which encompasses their own bodies as well as throwing their babies into a category of heightened cultural concern and scrutiny.

In interviews with health visitors I asked them if they thought that breastfeeding women were more concerned with weighing than women who were bottlefeeding and received mixed views.

I think, particularly breastfed babies, it's the only way that mums can gauge if babies are gaining weight and if they're feeding successfully.... It's a way of showing the mums that their babies are thriving, and they've no other way of seeing it. Other than weight (Jean, HV:i).

Lots of women who are bottlefeeding also do, because they are also wanting ... the same feedback from the weight gain that the baby's doing fine (Liz, HV:i).

Breastfeeding women in the clinic and in interviews stressed their desire to have their baby weighed in order to assure themselves that the baby was growing on their milk. In an early visit to the clinic Linda said "I like to see the weight every fortnight because with breastfeeding you can't tell how they are doing" (1:f).

Knowing that I was doing me job, really, that it was working. Yeah, it gives you a good sort of indication, if they are putting on weight. 'Cos that's what I was worrying more than anything, is he getting enough off me and is he gaining weight (Val, 2:1).

Weight was important as something to report to other members of the family who are not often present at clinic sessions and for whom this may be a way of asking for and receiving information about the baby. Wendy told me:

My sister asked a few times whether we'd had her weighed yet... so I could tell her that she put on eight ounces. She was quite shocked really, 'cos she thought that was quite a lot (2:1).

Isla reported; "People are ringing up to see how big he is" (BG:f).

Tessa, who had decided not to weigh routinely, felt this pressure of accountability, saying: "We were doing a bit of a family tour, and I wanted to know what the weight gain was because they

would all ask” (2:2). It was not just families, but the wider social circle who was interested. Jayne reported; “Everyone at my husband’s work wanted to know how much he weighed” (2:1).

When the weight was not as good as hoped for, there could be pressure on the mother to change how she was feeding the baby:

When she wasn’t gaining weight my mother-in-law was doing her best ‘put her on the bottle, put her on the bottle’ (Hannah, 1:f).

Even when the weight was going well, family comments could show a lack of faith in the ability of breast milk to sustain a baby:

I’ve had comments from the in-laws, like ... when she’s put a reasonable amount on, ‘oh, you must have some good stuff then’. As if it’s like impossible, like that you could possibly feed your own baby and it would grow... (Sarah, 2:1).

They just think he’s a big elephant. My grandma keeps saying ‘what are you feeding him on?’, ‘just breast milk’, ‘are you sure? What are you putting in it?’ (Una, 2:3).

Health visitors were aware of the influence of families

The generation that we’re in now, their parents were bottlefed....And umm, they say ‘that child’s starving, give it a bottle’, or ‘it’s unsettled, a bottle will help it sleep’ (Mandy, HV:i).

It would unfortunately seem that that is a bigger battle for ... working-class women, basically. They seem to be more likely, anecdotally, to have a partner, or a family member, a matriarchal figure, who will be there in the background, saying ‘well I think if you gave a bottle, it would be better’ (Liz, HV:i).

Pressure could come from the mother’s own concern for the baby and focus on weight:

My mum and everyone they are fine and they are very supportive, none of them have said to give him a bottle. It’s me. I don’t want him to suffer because of how I am feeding him (Suze, 1:f).

Tessa remarked: “It’s the only thing you can ask about a baby” (2:2), but as babies got older, weight might be less of a focus.

Mum [baby’s grandmother] does still ask ‘is she putting weight on?’ but perhaps not as often... I think the novelty’s gone off it... (Rachel, 2:2)

However, it might be mothers’ preoccupation with weight, as reinforced by the clinic, that encouraged families and others to concentrate on this aspect of baby development:

Magda: So we talked a bit about you reporting the weight to your mum. Is there anyone else in the family, or do other friends ask about it?

Zoë: I don’t know whether they ask, but they get told! (laughs) (2:1).

The urge to weigh to make sure the baby was gaining enough could act in reverse in two different ways. Olwen, whose baby grew quickly, said, “I didn’t dare weigh her at clinic, ’cos they’d say: ‘oh Cora’s a biggie’” (1:i). She might have been uncomfortable at having attention on her daughter’s ‘good’ performance or this might have been concern at the possibility that the baby was getting too big – a worry Zoë mentioned.

Olivia and Wendy told me that one reason they weighed infrequently was that they could tell that their babies were getting bigger; “I tend to just to tell by looking at her, really” (Wendy, 2:2).

Moving between Reasons for Weighing

Women did not give one reason for all weighing visits, or even only one reason for each clinic visit. For example, Zoë described intense medical weighing while she and her baby were in hospital for early neonatal weight loss, and told me how she subsequently set the frequency.

I go see my mum once a month – I try and get her weighed just before I go...so I’ve got a reasonable tale to tell her. And ... I think that’s a reasonable amount really, just so I know that she’s making the right progress.... My main concern is she doesn’t like you taking her clothes off, and putting her clothes on, particularly sleeves and things. ... all I’m doing really is going down there, taking her clothes off, putting her on the scales, and putting them back on ... I don’t feel that the information that I’m getting is that important, to make her that stressed really. I mean I do think it’s important that we know go every now and again. But... I don’t want to go every week, because it’s too much for her (2:2).

Zoë cites her need to account to her mother, which helps set the timing; the stress of the visit for the baby, a reason for not weighing I categorise as reverse recreational; an absence of other reasons to go to the clinic, characterised as reverse portal; and finally notes the information is not that important at this stage – a reverse medical reason for attending.

Monitored weight in the early weeks is one physical indicator of the establishment of effective breastfeeding and is therefore an appropriate object of interest. There is no suggestion in literature for parents as to how soon or on what basis this focus could lessen. Perhaps a clear explanation in the PCHR that five routine weights in the first year are enough, in the absence of any concern about the baby (Hall & Elliman, 2003), would help to establish the limits of the medical need for weighing. When babies have had a problem with weight, a clear plan upon discharge, including a phasing down of weighing frequency once the difficulty had been overcome, could be agreed and documented.

Some issues revealed in this categorisation of weighing, such as production of a keepsake and the desire to know which baby products are suitable, may be amenable to other solutions. Perhaps for the latter a 'rough' weight that the mother herself conducts could be suggested – this could be a matter for further investigation. Easy access to health visitors and to group sessions without an automatic weight taken at the door is another issue which deserves consideration. Fulford (2001) reports on how health visitors addressed this in one area by changing from drop-in clinics to a system of booked appointments¹¹⁵. Other reports would be welcome.

The expectation that the baby will be weighed at a clinic visit adds to the frequency of weighing and to the reliance of both health visitors and women on using weight as a short-hand for assessing the baby's well-being. In chapter 9 I will discuss the strategy of increasing the interval between weighings of the baby when weight gain is of concern. Although it may seem counter-intuitive, this may be a reaction to the intensity of focus on weighing.

A baby is a new member of society and society has an interest in how new members are cared for and enculturated (Kitzenger, 1996; Helman, 2000). Adequate physical growth is a sign that the mother or parents are providing care, and is taken in our society as powerful proof of this. This may seem axiomatic, but the possibility of an alternative view can be glimpsed in the work of Tchibindat et al. (2004), who conducted interviews with women and health workers in the Republic of Congo and discovered women preferred to focus on broader developmental milestones rather than weight for evaluating the progress of their babies. A section in the PCHR (CGF, 2004) has pages for recording such milestones, complete with pictures of the behaviours. I did not observe any interaction using these pages, nor did any women refer to them. It may be that giving attention to recording such milestones could help parents, families and health workers take a more holistic view of infant progress. A weight chart from the mid-twentieth century (Liddiard, 1946) incorporated developmental milestones, and an experiment of conducting a "non-weighing session" at a baby clinic taught mothers "to observe small changes in wellbeing, happiness, energy, and temper of the baby and to accept these as part of the wide variations in normal progress" (Lancet, 1957, p1273). It would be of interest to know why these approaches did not last in the UK, but I have discovered no further information.

During data collection for the new WHO charts, developmental data was collected and the results will be issued (Wijnhoven et al., 2004). This may influence future practice in the UK. A comment Tina made suggests caution:

¹¹⁵ Although routine weighing was still the most frequent single reason for coming to see the health visitors six months after the change.

Mums say 'he should be sitting by six months and should be crawling by eight months' and they're on the phone to you saying there is a problem. They're sure something is wrong if they're not, but it doesn't work like that (HV:f).

The simple substitution of measurement from weight to development may be unlikely to lessen frequent reliance on an external, quantitative yardstick.

Conclusion

In this chapter, I presented some reasons women gave for taking their baby to be weighed. This 'domain analysis' provides the first classification of differing 'pull' and 'push' factors which influence the frequency with which breastfeeding women bring their babies to be weighed.

In this analysis I included only breastfeeding women, so this account can only be partial. Clinic attendance patterns at four-five months are similar for breast- and bottlefed babies, (Hamlyn, unpublished personal communication, 2004). Investigation with formula feeding women might discover different factors, as well identifying how much overlap there is with reasons given by breastfeeding women. It is also possible that, in this small study, some reasons may not have been observed, or completely understood. There may also be regional or ethnic variations, not captured here. Identifying different reasons for weighing may be useful if changes to frequency are sought. Meeting these needs in another way may be important in order to bring the frequency of routine weighing in line with recommendations.

Analysing the elements within each type of weighing illuminates the overall meaning our culture attaches to weight gain in infants. Women bring their babies to be weighed as they feel the weight of cultural expectation that they will attend to this measure of infant well-being. In following the suggested path of frequent presentation to medical assessment of the physical baby, women participate in creating a measure of success of their care. Placement of this measurement centrally, puts physical growth as the major source of the assessment of success in breastfeeding and in mothering.

The assumption that health is easily measured through physical weight gain, and that weight increases will happen in a linear way in direct response to what milk the baby receives are further explored in subsequent chapters. In chapter 7, I move to a consideration of the character of the relationship of the weighing partners, women and health visitors, in the clinic. I also notice the place breastfeeding support has in clinic interactions. I investigate how the focus on weighing relates to the desire of getting baby behaviour to conform to desirable

norms. The reasons for weighing discussed here give a picture of a measurement understood to be simply true and indicative of the baby's well-being and development in a straight-forward way. This understanding and the very everyday nature of this measurement underpin the way in which women adopt weight as an absolute measure of the breastfeeding experience both for themselves and for their babies.

Chapter 7: A HIERARCHICAL PARTNERSHIP:

WOMEN AND HEALTH VISITORS INTERACTING IN THE CLINIC

“Crowded child welfare centres do not provide an atmosphere which encourages breast-feeding” (Spence, 1936, p733).

“My mother told me that when she had her fourth baby, it was at the time when health visitors were just starting routine visits. So this health visitor came to call and my mother, with children at both feet and one in each arm, opened the door and said, ‘No, you may not come in. I have had four children and brought them up myself. I don’t need the state’s intervention with this one, thank you very much.’ And that was the end of that!” (Carol Walton, born 1943, in Devlin, ed., 1995, p 215).

Health visitors provide a universal service to families with children under the age of five. A major point of contact is the mother, and they seek to create and nurture a relationship with women on their caseloads. Health visitors are expected to have knowledge about what is normal, experience of how to get babies to respond in desired ways, and they also retain functions of surveillance over babies’ well-being. In this chapter I explore the way health visitors work with women, noting how the structure of contacts reinforces a high frequency of weighing. I also examine how help for breastfeeding is sought and given and consider what issues are discussed in clinic, and how these demonstrate women’s and health visitors’ expectations of the early months of motherhood. Their focus on achieving desired aims of baby behaviour provides a context for frequent weight monitoring. This lays the foundation for expected outcomes from each weighing encounter, explored further in chapter 10 and for the understanding of the meaning of charted weight.

Health Visitors Working with Mothers

Types of Contact

Health visitors assume care of new mothers and babies from midwives 10 to 14 days after the birth¹¹⁶. Each is responsible for a caseload of families, with whom they expect to be involved as long as there is a child under the age of five – where women have several children, the relationship lasts for some years. A broad range of health issues may be raised during this time. Liz described how a discussion on weaning could widen out:

¹¹⁶ Midwifery care can extend to 28 days; midwives retain responsibility until they hand over. In practice, no woman in this study mentioned having prolonged midwifery care.

I feel that it's a time that you can take an opportunity when you're talking to parents to actually talk about family health.... Try to introduce the ideas of thinking about heart disease, diabetes, rather than just isolate it down ...to the baby (HV:i).

Health visitors described two main ways in which they had contact with mothers: visits and clinics¹¹⁷. Visits were to women on their caseload, while clinics were conducted on a regular basis at GP surgeries, or in health authority clinics. At a clinic a health visitor would see women from her own and from colleagues' caseloads. The clinic record card and the PCHR thus provide essential continuity as they allow a health visitor seeing a mother she does not know to have a snapshot of past interactions.

The first home visit is timetabled when the baby is around ten days old. A lot of information needs to be given at this visit, as well weighing and examining the baby (Plews, 1998); breastfeeding is not the major focus. The subsequent pattern of visiting is at the health visitor's discretion. Tina told me: "I visit more often than other health visitors. I like to build up a relationship" (HV:f). Jean however said, "To have mums to attend clinic is good from a health visiting point of view, because it cuts down the need to go and visit" (HV:f). Thus women may never have the chance of a home visit focussing on breastfeeding.

Health visitor's work patterns combine covering clinic sessions and meeting the needs of women attending, with the ability to arrange visits in negotiation with mothers.¹¹⁸ However, visiting may not easily meet urgent needs of women. During the summer, when several health visitors were on holiday, I attended a breastfeeding group which Tina was covering. During the early part of the session, she was busy with phone calls in the office, while I sat with three women (Kirsty, Suze and Rachel). All described difficulties with breastfeeding, and, after about half an hour, I went to tell Tina that they would like to speak to her. A discussion ensued¹¹⁹, and Tina gave information on a variety of points. At the end of the session, Rachel expressed her continuing frustration at how things were going, saying; "I just want to get like others – where you see them just pick up the baby and feed. I am just on the edge of giving up." Tina repeated supportive suggestions she had made, and asked; "Is Mandy your health visitor? If you need some help, ring her when she gets back and she will come and see you and help you with feeding" (BG:f). This response indicated that, if the woman's need was beyond a

¹¹⁷ This is not intended to be an exhaustive description of health visiting work.

¹¹⁸ Liz told me that when she began health visiting in the 1980's visits were more frequent and there had been pressure to decrease the number, and it is clear that health visitors are given guidance on the frequency of visiting, with the size of caseloads providing one limiting factor. Detailed consideration of these issues is outside the scope of this thesis.

¹¹⁹ This session was different from the usual group format, with something of the feel of a 'panel' session, or a press conference. This may be due to the fact that all the women were new to the group and Tina was also not usually in the group, or it may be due to the way Tina came in part way.

certain level of information, a home visit would be sought, perhaps partly for privacy. At the same time, Tina seemed to be placing the relationship between Rachel and her own health visitor above a need for immediate attention. I noted, “Mandy is due to be away for another week – is this wait appropriate?” (BG:f). Women may be discouraged from continuing breastfeeding by waiting for difficulties to be addressed (Dyball, 1992).

Health visitors and women also had contact through phone calls and groups. Phone contact was mentioned by health visitors mainly as a means of arranging visits, although they did note calls from women requesting information and help. In phase one, mothers rarely mentioned phone contact (perhaps as we were in the clinic and my questions centred on what was happening there); in phase two, mothers did mention calling health visitors. Marie expressed frustration at the difficulties in getting hold of the health visitor on the phone, which had, for example, delayed her contacting me about joining the study. I also found that getting hold of a specific health visitor could be extremely difficult (Burnard & Morrison, 1990; Mellor & Chambers, 1995).

Groups such as the breastfeeding support group and baby massage classes were mentioned as important ways of staying in touch. Zoë said:

I go to the breastfeeding group every week and ...to aqua natal – and both of those are health visitor attended... I am doing a six-week course on baby massage ... so I'm seeing people, and if I've got any concerns I can get them dealt with straight away (2:2).

Through these, women could arrange their own ways of seeing health visitors frequently, though not necessarily their own health visitor. Holidays, in-service training, meetings, as well as covering clinics in different locations meant that it might be hard to see a specific health visitor. Several health visitors in this study also worked part-time. The flexibility to arrange visits when women needed them or the health visitor felt they were needed might be less in practice than in theory.

Frequency of Contact and Weighing

In the previous chapter I described reasons women gave for attending clinic for weighing and noted that this was more frequent than recommended. In my observations and what women reported about other clinics, weighing the baby was expected as part of entering the clinic. I mentioned, in chapter 5, that a health visitor asked; “Can I weigh and measure him?”(1:f), but this seemed formulaic, as the mother was already undressing the baby. In almost all clinic contacts it seemed assumed by both mother and health visitor that the baby would be weighed.

Several studies have found that women value frequent, possibly weekly, contact, especially in the early days (Sefi & MacFarlane, 1985; Plastow, 2000; Fulford, 2001). This may stem from lack of extended family close by (Plastow, 2000) and may be reinforced, or even induced, by antenatal and maternity care which induces passivity and an expectation of being managed by professionals (Dyball, 1992). Where baby clinics are set up so that the expectation is that weighing is part of the routine, meeting the need for contact may increase weighing frequency (Fulford, 2001).

Health visitors did not give clear information on weighing frequencies¹²⁰. A mother on a first visit to the clinic asked Jean, “do I come every Wednesday?” who replied, “We’re here every Wednesday, but you don’t have to come every week, it’s up to you, there’s no hard and fast rule” (1:f). When Maxine’s baby was 10 days old she told me:

They haven’t said how often I’ll go. I don’t know if it will be every week or every other week....I think, if it’s up to me, I’d take her every week (2:1).

I did not hear any health visitor suggesting that weighing need be no more frequent than immunisations. However, women could fall through the contact net; Wendy moved to what one of the health visitors described to me as a ‘sink estate’ when her baby was a few weeks old and had little contact.

The last time we saw the health visitor, when she came here, she did say that she’d be back at around about five months and talk about weaning, but she never did, so we did all that by ourselves (2:3).

Sarah was on maternity leave from her job as a health visitor; she worked in a deprived part of the town. She told me that she had few breastfeeding mothers on her caseload, but:

When I get them I really look after them, because I’m so keen to keep them breastfeeding ... so I tend to offer weekly visits for weighing and to talk about any problems (2:1).

She went on to reflect that, if she had a large number of breastfeeding mothers on her caseload, she might not have time to do this. The amount of contact seemed to vary due to circumstances rather than just because of an assessment of need.

Mothers were conscious that judgements about them might be made on the basis of their frequency of visiting. Marie stated her ideal (which she did not always find easy to meet) of attending clinic every two weeks because otherwise “You just sound...this uncaring mother

¹²⁰ Although they reported to me that this was a topic they would cover on the first home visit. No woman mentioned clear information which indicated that weighing should be at the five points suggested by Hall and Elliman (2003).

that you can't be bothered taking them to be weighed" (2:1). Rosemary reflected on how she had frequently weighed her baby over the first six months and said:

If perhaps I had bottledfed, would I have walked to the clinic every Wednesday to get her weighed? I don't know. I might not have in the end, because I might have been the only one that I saw there every week, and thought 'I'm a neurotic mum here' (2:3).

Tessa, who had discussed her intention not to have her second baby weighed routinely with her health visitor, Liz, during pregnancy, said: "I am aware that I'm not going this time and I think they might be wondering where I am" (2:2). Women seemed to feel that they needed to show the health visitor that they were good mothers by coming to clinic. This may increase the instances of 'accountability weighing', which I discussed in the previous chapter. Jean commented:

There is a lot of misunderstanding about the health visitor role. Women ask if you come to look in the cupboards or if you are checking up on how they look after the children. ...They think we work for social services...People don't realise we don't have the power to take away the baby. We are the family service (HV:f).

However, health visitors do liaise with social services, and thus straddle contradictions of working in partnership with mothers and the requirement of surveillance, to ensure there are no extreme outcomes (Mayall & Grossmith, 1985; Watson, 1986; Dingwall & Robinson, 1990; Heritage & Sefi, 1991; Symonds 1991; Symonds, 1993; Peckover, 2002). Mothers can set their own contact frequency, yet may feel obliged to show that they are doing the right thing by coming to clinic and having the baby weighed. The need of the health visitor to maintain a watch on the baby, while also wishing to relate to the mother on a basis of mutuality provides the atmosphere in which baby weighing is conducted. Weighing helps draw the mother to the clinic, giving the health visitor information to enter into her ledger of surveillance, and offers mothers other benefits, such as a keepsake, entrance to the clinic for social contact and the right to ask the health visitor questions, and the sense of doing the right thing.

Observing this "top-down" (Foster & Mayall, 1990, p286), hierarchical partnership during clinic encounters, I was occasionally reminded that this was only part of a larger hierarchy. Health visitors were accountable to the health authority, and were also constrained by policies set in accordance with the requirements of local paediatricians and the national programme of child health surveillance (Hall & Elliman, 2003). The growth chart was a reminder of the medical and scientific edifice behind the health visitor and her practice. Ultimately, too, the mother and health visitor were in partnership to manage the baby – who thus sat at the bottom of the hierarchy; I return to this in the last part of this chapter.

Women's Views of Health Visitors

Women voiced differing opinions of their experiences with their health visitor. Olwen said:

She was absolutely brilliant, not just on breastfeeding but anything. She just, she made everybody feel that everything you were doing was natural and normal and there was no right or wrong way (1:i).

Olivia, however, stated:

I am not very impressed with this health visitor, I am just thankful that I don't really need her.... she never answers a question, and if she does she says different things every time. I don't have faith in her (2:3).

These represent the two extremes voiced in this study, with most women generally positive; this mirrors findings of other studies Cowpe et al., 1994; Machen, 1996; Bowns et al., 2000).

Tessa reflected on her health visitor's reaction to her choice not to weigh her baby:

I've been lucky that the health visitor is very much respectful of what I wanted to do. She's been supportive, she's given me help when I have asked her... my friend says hers is not the same (2:3).

Tessa felt receiving support was due to luck, rather than something she had a right to expect. Such remarks indicated that mothers did not feel themselves as equals with health visitors.

Tension between Establishing the Relationship and Effective Breastfeeding Support

Establishing and maintaining relationships with women has been a focus for research and comment by health visitors (Luker & Chalmers, 1990; Chalmers & Luker, 1991; Chalmers, 1992; Kendall, 1993; de la Cuesta, 1994; Bidmead et al., 2002; Bidmead & Cowley, 2005). In my study, it appeared that while health visitors saw breastfeeding support as something they should offer, they were wary of being too pro-breastfeeding as this might damage the emerging relationship: a finding echoed by Shaw-Flach (2003). Gill (2001) noted a mismatch with women wanting encouragement and nurses¹²¹ saying "we don't want to push them" (p 407).

Liz told me:

You have a fine line between support and...like Mabel – she worked here before and was so pro-breastfeeding; clients used to come in and say [whispers] 'I have given him a bottle, but don't tell Mabel'. We don't want to be the breastfeeding police (HV:f).

It appears that in this sense policing is seen as intrusive oppression by the over-zealous state – and perhaps as enforcing an unwanted method of feeding whatever the individual preference

¹²¹ This study was conducted in the USA, where nurses perform the role of midwives in UK postnatal care.

(Bartlett, 2002). However, in common discourse, policing is also understood as the citizen's protection against crime. In this sense, 'policing breastfeeding' might consist of regular contact and evaluation of feeding, ensuring that small scale threats to continuing untroubled breastfeeding are tackled promptly and before they escalate. Indeed, 'breastfeeding police' might be valued, as visible 'bobbies on the beat', tackling the causes of breastfeeding difficulty. This latter is a role that women have expressed their value for, either from health visitors, or from midwives or breastfeeding support volunteers (Hoddinott & Pill, 2000; Brown 2000; Gill, 2001; Hauck et al, 2002) Health visitors express concern at adopting too close an association with support for breastfeeding (Wall, 2003; Wall, 2004¹²²), since women have choice in feeding method, and their choice should be respected. Tension between supporting breastfeeding wholeheartedly while respecting choice is a topic of debate (Hunter, 1998, 1999; Minchin, 1998).

Health visitors talked about their competence at helping women with breastfeeding. Mandy, described her approach "I think I'm quite good at, it's not the first thing I say: 'oh give a bottle'"(HV:i). Liz reflected:

I think as a team... we are less likely to be falling down the path of... if a baby is not classically thriving, saying you have to give bottles. We tend to try and be supportive of strategies to support the baby's growth and weight in relation to breastfeeding – I don't think that's necessarily the case in all teams (HV:i).

However, Jean expressed reservations about facilitating the breastfeeding group during the summer; "I don't enjoy it when I don't know what I am talking about – did you notice me hanging back and letting them talk to one another?" (1:f). Mandy noted difficulties in giving information that might support continued breastfeeding in the face of a mother's choice: "I find it hard to say 'don't give a bottle' once they've started.... Sometimes I'll say to them 'you're probably not helping because you're giving a bottle'" (HV:i).

The health visitors were all undergoing training in baby massage at the time of the study, but they had not had an in-service session on breastfeeding in the last few years. Their initial training in breastfeeding had been brief – two of the four told me they relied on what they had learned during midwifery training and practice: however this would have covered only the early weeks of breastfeeding. Wills (2004), a midwife who considered herself "both knowledgeable and experienced" about breastfeeding (p32), found attending the UNICEF three-day Breastfeeding Management course "an eye-opener" which "totally changed" her practice (p33).

¹²² The letters cited here present the view of one health visitor on the dangers of banning advertising for formula milk since women require information on all possible infant feeding choices. Her letter sparked debate with Curry (2003) noting support and Breward (2004), Goalen (2004), Neil (2003, 2004), Rapley (2003, 2004) and Shulver (2004) opposing her views. (Neil is an NCT breastfeeding counsellor and Rapley works for UNICEF UK BFI.)

This suggests that even a short, well-structured educational input may improve professionals' confidence and skills.

At times, hearing the information and advice women reported having received, I felt, as Ker (2001) reported feeling, that the depth of understanding of breastfeeding demonstrated and the value of specific information could be questioned. However, women did not appear to be aware that a more in-depth evaluation of breastfeeding difficulties might be possible. Therefore they might not even ask questions assuming that they already knew what could be known. Health visitors and women appeared to share an understanding at about the level available in many standard baby care books; a greatly impoverished understanding, from my perspective.

A further possible barrier to offering breastfeeding support was one health visitor respecting the relationship between another health visitor and a mother on her caseload. For example, Liz, who had quite a bit of confidence in breastfeeding and experience of helping women, mentioned "tactfully" offering to visit a mother on another caseload to help with positioning (HV:i). The example I mentioned of Tina suggesting a mother ask for a visit when her health visitor returned from holiday, also illustrates this.

Following on from Midwives

Care for the first 10 days and the initiation of breastfeeding falls to midwives, in hospital and community. Many women in this study mentioned the help they had received from their midwives. Health visitors appeared to realise that whatever support and information they offered women about breastfeeding would be shaped by what had happened during midwifery care. In particular, the physical skills of positioning and attachment might be expected to have already been adequately covered (Ker, 2001). Tina, who had previously spent years working as a midwife, commented;

There's this thing about midwives touch bodies and look at your perineum and help you with breastfeeding. Health visitors don't do that. You're all covered up (HV:i).

Symonds (1991) notes a tradition of care performed in a "hands off position" (p259). When I interviewed the health visitors there appeared to have been a recent discussion about giving such help between them.

The whole issue is one where we have a bit of a heated debate in the team about the fact that I said that I felt – I know it may not be fair to criticise – but I was a little bit annoyed that I'm not sure how much input is focussed on it from the midwifery side. I feel very disappointed that we get in at 10 to 14 days and I feel that often things are already a disaster (Liz, HV:i).

Position, latching on... We were talking about that yesterday and I was saying it's very hard to go and see a mum – Liz was saying she likes to watch a mum breastfeeding ...And she thinks the midwives should do that. And I said, having been a midwife...I thought that was unrealistic because they ...cannot time their visits just to coincide with a feed (Mandy, HV:i).

The expectation that the physical skills of breastfeeding will already have been addressed¹²³ meant that this was something health visitors felt they did not need to focus on. During the months of observation in the clinic I was struck forcibly by the absence of discussion of these skills, or offers of help with them. This central area of breastfeeding knowledge¹²⁴ was ceded as being part of the midwives' territory.

Liz told me that there were no local joint training or discussion forums where health visitors and midwives could share reflections on practice. It seemed that inheriting breastfeeding support from midwives, and having no control over what that support was, strengthened a tendency to shy away from taking a strong stand for breastfeeding and a preference for emphasising the value of building a relationship.

Women's Expectations of Breastfeeding Support from Health Visitors

Women may not expect help with breastfeeding from health visitors, relying more on midwives (Ker, 2001), and may wait for professionals to offer assistance, although valuing practical help of this kind (Hoddinott & Pill, 2000). Women in the present study did ask for and receive information about breastfeeding; several mentioned help from health visitors in first interviews in phase two; for example Alex about collecting milk in breast shells, and Jayne on coping with mastitis. Most women did mention in more detail the information they had received from midwives. Zoë's response was typical: "By the time I saw the health visitor, we had more or less...got the technique" (2:1).

I observed women coming to access breastfeeding information. At the breastfeeding group Suze reported a clinic visit in which her son's weight had caused concern. The doctor had suggested that she could give him formula "if I was worried, which I wasn't until he said that". Suze now wanted "to have a word with an expert" – the health visitor (BG:f). As she chose to attend the group rather than approach her own health visitor, it was not completely clear where she saw this expertise to be. Tessa had attended LLLGB meetings when she had her first child

¹²³ Mandy would expect them to have been addressed during the hospital stay.

¹²⁴ Since readjustment of positioning and attachment is suggested as a remedial measure for addressing breastfeeding difficulties at any stage (Renfrew et al., 2000; Renfrew et al., 2005), this creates a lack of appropriate skill for health visitors in supporting continued breastfeeding. My own and colleagues' experience, too, is that as babies grow, some mothers who had no early difficulties find that the larger baby needs a different position.

and found this very useful during a long time when her daughter would not accept solid food. She told me “for that sort of thing, I would go to them, still. La Leche I would go to more for the social angles of breastfeeding” (2:3). Olivia said: “I don’t view her as giving advice on breastfeeding” (2:1). Instead, she would go to the (newly formed) hospital breastfeeding group or contact a midwife she knew. There were thus differences between women as to whether they would turn to health visitors for breastfeeding information or help. This may reflect the muted message health visitors gave about their availability.

I asked mothers in phase two who stopped breastfeeding if they felt their health visitors had supported them with this process. These mothers were very positive that the support and help with switching over to formula feeding had been very useful. “I suppose they support what you want. Yeah they were fine, whatever he needs” Paula (2:2). A painful bout of thrush on her nipples and in her baby’s mouth (diagnosed by her mother, a nurse) had led Val to stop breastfeeding:

The health visitor ... had a look at him, she said ‘yeah, he’s got thrush’, and she said let me have a look at you, she said ‘yeah you have got it’...Then they said ‘you can carry on’ (2:2).

Val decided to wean but said; “I was glad I had gone down and seen somebody” (2:2).

Health visitors need to balance between offering support and help with breastfeeding when this is required and preserving a relationship so that they will still be able to be available and supportive after breastfeeding ends. This appears to have resulted in some ‘soft-peddling’ or ‘self-muting’ on breastfeeding for these health visitors (as seen in Kirkham, 1999). In discussing Carol after a breastfeeding group session Liz remarked “it’s hard not to say that I think the bottlefeeding makes the reflux worse” (HV:f). I noted Mandy said she found it hard to say that bottles might be unhelpful, even where she realised that they might undermine breastfeeding. It seems that there is potential for health visitors to strengthen their identification with breastfeeding support, if they chose, but they would have to choose.

Norms of Baby Behaviour

Women go to clinics to get information and support with their baby’s feeding, sleeping and behaviour (Gastrell, 1986; Sharpe & Lowenthal, 1992; Cowpe et al., 1994; Carter & Bannon, 1997; Ewing & Green, 2000). Watching and listening in the clinic, a clear sense emerged that the focus of the partnership between mothers and health visitors in the early months was channelled towards getting the baby into patterns which were both desirable and expected. Mothers wanted their baby to sleep at night-time, preferably through the night, to feed in a

predictable way and to achieve a 'good enough' weight gain. They wanted information from health visitors to confirm whether or not their baby's behaviour was within expected norms, and help in achieving socially acceptable routines of feeding and sleeping. These were accepted as self-evident goals by health visitors: a strong sense of shared norms was revealed. Mothers seemed to hold themselves responsible for managing routines of feeding and sleeping and fostering desirable infant behaviours. The health visitor's role was framed as helping mothers achieve these, rather than presenting routines as one way to manage infants with the option of a much gentler approach accommodating infant's desires for frequent feeding and contact with caregivers and physiological sleeping patterns. In my study, achieving routines was approached from the mother's perspective and her interests, and those of her family and employer were noted, but the needs, feelings and developing self of the baby was seldom considered.

Several generations of women have been educated in an expectation of quick establishment of routines for feeding and sleeping for lengthy periods in a separate room (Fisher, 1985; McIntosh, 1985; Funkquist et al., 2005). Implementing routines has been described as imposing 'cache' baby care patterns on the biology of a 'carry' species (Douglas, 2005)¹²⁵. Douglas (2005) describes this as a "misalignment of biology and culture" (p887) which may lead to infant "sensory under-nourishment" (p894) and crying, unsettled behaviour. Funkquist et al. (2005) note that such crying has been accepted as part of normal infant behaviour, so encouraging parents not to respond to infant distress, in pursuit of fostering independence. Hearing their babies crying for several hours a day may have a negative impact on mothers (Binns & Scott, 2002), and they seek underlying causes. Commonly diagnosed conditions such 'reflux' (Douglas, 2005), 'colic', and 'sleep disorders' (Armstrong et al., 2000) are the medicalised terms used to describe "VONIB [...] which should be renamed 'variant[s] of normal infant behaviour'" (Armstrong et al., 2000, p304). Widespread use of opium-based cordials for infants for centuries suggests that normal infant behaviour has long been ill-tuned to social organisation (Brian, 1994). Breastfeeding, which evolved to provide milk frequently and in response to an infant carried in semi-continuous contact is thus 'shoe-horned' into patterns of care which foreshadow the regimented nursery, school and workplace lives individuals are destined for and in which their mothers usually participated in up to the birth. These social habits of separated infant care are "not easily 'unlearned' once internalised" and are heavily socially sanctioned (Büskens, 2001, p82). However, as Hanss (2004) describes, it can be enormously useful for some women just to learn that frequent feeding is normal.

¹²⁵ 'Cache' species, such as mice and rabbits, leave their infants in a nest while the mother goes off to forage for food. 'Carry species', such as apes, carry their young. Other group members may carry the infant, but babies are not left alone, out of contact.

Interactions over these issues were often similar whether the mother was breastfeeding or bottlefeeding. It was interesting to note that health visitor responses were standard, with little difference where the woman was involved in an embodied way through breastfeeding. This approach appeared to treat breastfeeding as simply one possible milk delivery system.

Sleep

Women spoke often about how their babies were sleeping, with particular emphasis on the length of unbroken sleep at night. Mothers could appear consumed with concern about this. Anne, whose seven-week-old baby was breast and bottlefed, came to the clinic detailing a pattern of waking in the night, after more settled nights previously. A month later, Anne spoke to Tina, again about her baby waking in the night. “We thought we’d cracked it the last two weeks, but then this. She is fine in herself, there is nothing to put it down to” (1:f). Both times the health visitors responded by suggesting ways to increase the likelihood that the baby would sleep longer in response to the mother’s desire, although Liz did suggest the first time; “Its early yet for any routine” (HV:f).

The implication that there was something problematic to be ‘cracked’ came up again when Vicki told me; “we’re getting there”. I asked “getting there?...what does that mean...you are getting to know what he wants?”. She replied, “No, more that he is sleeping and sleeping more at night and more settled” (BG:f). Vicki appeared to have a clear goal of night-time behaviour for her baby.

Health visitors might ask about sleep routines. Tina, meeting Bethany for the first time when her baby was 16 weeks old asked; “does she sleep through for you?” (1: taped encounter). Bethany said that the baby did and Tina remarked; “That’s the thing about breastfed babies, sometimes they’re a little harder to get through the night.” This seemed to indicate an atmosphere where breastfeeding was regarded as a possible obstacle to achieving other goals (Anderson et al., 2002). On another visit Bethany described recent nights:

Bethany: I do feed her sometimes when she wakes up. She woke three times last night and I just went in and showed her that I was there and she went off again.

Tina: I would just go and reassure her – don’t pick her up and take her into bed, ‘cos she’ll get the idea that she can do that...and if you have her in bed... she will want to come in all the time (1:f).

It was clear that the lack of sleep, particularly in the early days, was very difficult for women; Alex reported that she had told the baby “‘I’ll throw you through the window in a minute if you don’t go back to sleep’: I had to put her on the bed and leave in the end” (2:1).

Women reported using a variety of techniques to encourage their babies to sleep, including bringing the baby into bed. Health visitors were likely to suggest leaving, offering dummies or water, or ignoring babies until they were actually crying. Tina's mention of taking the baby into bed was unusual, although she did this to warn against it. Co-sleeping has been controversial with concern about risks to infants (Blair & Ball, 2004; UNICEF Breastfeeding Friendly Initiative & Foundation for the Study of Infant Death, 2005). Ball et al. (1999; Ball, 2002, 2003) found that bed sharing was a common practice for UK parents, with breastfeeding mothers more likely to have their babies in bed; this does appear to allow breastfeeding mothers more sleep (Quillin & Glenn, 2003). Ball (2003) asserts that bed-sharing can support breastfeeding while current cultural norms valuing separate, unbroken sleep may undermine it.

Regular Feeding

Fisher (1982) noted that the then current accepted management techniques for breastfeeding were examples of restriction: "regularity, frequency, and initial and ultimate duration – and a ban on night feeds!" (p31). The great value attached to feeding regularity throughout the 20th century was noted in chapter 2; the women in this clinic were the inheritors of these expectations (Funkquist et al., 2005). Mandy said "Mums around here are workers with high-flying jobs. They can't get used to not knowing when the baby needs feeding" (HV:f). Nadine described her baby, "He's been pretty good like that from the beginning. I mean he does feed quite often, but at least you know roughly when" (2:1). Predictability was valued although the baby was feeding frequently. Val's baby had fed every hour or two in the early days, but she told me, when he was three weeks old: "We've had a few ups and downs, just to cope with demand at first, but now he's steadily getting into a better pattern" (2:1).

Formula feeding is commonly expected to produce more predictable feeding routines and the use of supplements might be suggested as a way of attaining longer inter-feed intervals. Ulrike told me: "It's actually my health visitor who told me maybe she should have a supplement at night ... because she's been waking up twice" (1:i). Paula decided herself to offer formula:

During the day I give the bottle, it's easier when I'm going out shopping because I know I've got at least three hours between each feed...it's knowing I have three hours, whereas with the breastfeeding it could be in an hour, two hours (2:1).

Jayne described how it felt in the early weeks:

Just the question really of how long you should be breastfeeding for and how often, but there's no answer, is there? You just feed on demand... Sometimes you just feel that whenever he's awake he thinks he should be feeding. You just want to know that that's normal for newborn babies and ... you want to know what babies should be doing (2:1).

This illustrates the lack of confidence that demand feeding could really mean feeding as frequently as babies wanted it (Dyball, 1992; Dykes, 2005a)¹²⁶. Jayne also appears to yearn for information about what is normal, and to find unpatterned feeding and sleeping unnerving. By focussing on routines and norms alone, without fostering the confidence to get to know the individual personality of the baby and to respond to his or her needs, it appeared that babies were treated as objects of management, rather than as new individuals who form half of the mother-baby dyad, and significant new members of their family (Fundquist et al., 2005).

Mother-to-Mother: Reinforcing Routines

Mothers' assumptions that they should aim to be working toward routines and a full night's sleep were accepted by health visitors who might merely note that it would take time to achieve these. It was clear that mothers arrived with these expectations rather than receiving them from health visitors: they both derived these from shared cultural expectations (Leach, 1994; Fukquist et al., 2005)). Women were ready to enforce these norms on each other, as was evident in conversations I heard.

On Isla's first visit to the breastfeeding group when her baby was a few weeks old, she asked Carol, whose baby was three months, "Is he sleeping through the night?"(BG:f). She went on to detail how long her son was sleeping. On a subsequent visit, Isla was asked about her baby by Emma: "Is he good – is he sleeping through the night?" Isla replied "Well no, he is up every 2 hours" (BG:f).

Bethany and Anne met in the clinic and greeted one another. They had not seen each other since their babies were born.

Anne: Hasn't she grown! (Discussion how they grow and change – Anne can't imagine her baby changing so much, e.g. gaining head control)

Bethany: Is she sleeping through?

Anne: [Explains that she goes for 5 hours then wakes for a small time for a feed and goes back down. Anne regards this as pretty good.] Is she sleeping through?

Bethany: She was, she started at 8 weeks, but she is waking up again now and I am wondering if she wants more...

Anne: If she's ready for something a little more solid? (1:f).

When Rachel described her baby's frequent feeding Suze responded:

¹²⁶ Although one can hardly blame them for confusion when a writer, offering pro-breastfeeding information to obstetricians, describes "feeding routines" as "frequent and unrestricted breastfeeding (approximately every 2-3 hours)", (Neifert, 2004, p663). While it is clear that she is suggesting that babies who are not feeding effectively will seek the breast frequently, the attempt to offer exact quantification simply confuses the issue, in my view.

Maybe you are feeding too often? And making yourself sore? Maybe you're not giving him a full feed. My mum told me, put him on the floor and he will get cold and he will wake up for the other side....you need to make sure he has a proper feed and then he won't wake up so often (BG:f).

The idea of a 'full feed' is taken from formula milk in a bottle where the person feeding the baby can see how much milk remains of a pre-determined amount mixed and offered to the baby (Rothman & Simonds, 2003); babies can control the fat quantity of feeds by the frequency of feeding, if they are offered free access to the breast and are in a position to feed effectively (Renfrew et al., 2000). (In fact, it seemed likely that Rachel's baby was not in an effective feeding position – and the sore nipples indicate that it was not pain-free; in this case an increase in comfort and a decrease in suckling time might be achieved by physical repositioning of the baby at the breast.)

Research suggests that breastfed babies may not have routines for feeding (Hörnell et al., 1999) or sleep through the night in the early months (Ball et al., 1999; Ball, 2002, 2003). If mothers pursue these goals, this may jeopardise the physiological success of breastfeeding (Woolridge, 1995a). Clearly, if women arrive asking for help in establishing routines, health visitors are responding to their requests. However I heard no information offered suggesting that limiting the number or duration of feeds might impinge on the physiological adequacy of breastfeeding or that night feeds might help to establish and maintain milk supply. Women may be unaware that their choices in establishing routines could affect milk supply. Elkan et al. (2000)¹²⁷ note that health visiting has “a long history as a vehicle for conveying to families at an individual level institutionalised social norms and values concerning methods of child-rearing” (p199). It seems that our general social ambivalence about breastfeeding, which I explore further in chapter 11, and a preference for babies who fit easily into modern family life, may leave health visitors unsure whether to offer robust support for breastfeeding or for the establishment of infant feeding and sleeping routines.

For women in this study, frequency of feeding may have been compounded by the lack of on-going help with positioning and attachment. Efficient drainage of the breast increases not only the quantity of milk the baby obtains but also the fat content and ineffective feeding can lead to babies getting enough volume without satiety (Woolridge et al., 1988). Detailed understanding of breast milk production was not exhibited by mothers or health visitors in this study. Our general societal stock of breastfeeding knowledge does not match the physiology revealed in recent research. One interesting example is the fact that days of increased frequency of feeding

¹²⁷ Their main thrust was to review the effectiveness of home visiting by health visitors.

by babies, which appears to be a normal variation of behaviour¹²⁸, are referred to as ‘growth spurts’ (Mohrbacher & Stock, 2003; DH, 2005). This term signals a cultural expectation that feeding is done merely to fuel weight gain, and that a desire to increase frequency on the part of the baby could only be excused on the grounds of the physical need for growth.

Where is the Relationship?

Discussions with the health visitor as I observed them and as reported by women rarely seemed to focus on the mother-baby relationship. A number of women in phase two mentioned the special bond they felt with their baby as an important reason for breastfeeding. Olivia, for example, told me: “I put down the special bond I have with my first son to breastfeeding for so long” (2:1). At times, bonding, though valued, appeared to be conceptualised as having instant effect rather than something which deepened with time (Wood et al., 1997; Hausman, 2003). For example, Alex said:

I think I’ve got that bond that I wouldn’t have had if I’d have bottlefed, I just feel that she’s just close to me now (2:1; baby 10 days).

She stopped breastfeeding before 8 weeks and she told me:

I felt guilty at first, taking her off the breast, because I felt to myself it’s supposed to give you that bond. But I’ve got the bond with her (2:2).

This conceptualisation of bonding deserves further investigation, particularly in relation to the conception of the whole relationship on the part of the mother.

Conclusion

Mothers come to the clinic where they can access health visitor support and enlist help in aspects of baby care. Tasks of the clinic include producing a weight record and managing feeding and other baby behaviour. While it seems that breastfeeding should belong centrally here, it was treated as one variety of milk delivery system. Detailed information for and help with breastfeeding was largely absent from clinic sessions. Rather than forge an identity as offering detailed, skilled help with breastfeeding, health visitors offered verbal support and encouragement and concentrated on developing a relationship with women which could last whatever the breastfeeding outcome.

While health visitors and women met face to face, each had a host of others at her back. Behind the health visitor was the medical referral system which she might invoke if the baby appeared to need this. She also had responsibility for assuring that children were not subject to

¹²⁸ Although whether this is simply normal in societies where numbers of feeds are noted and there is a general desire to reduce feeding episodes and keep the number low, is not known.

abuse. Mothers had their families, waiting to phone to hear that they had received an acceptable plotted weight, and to whom they might report on how they were modifying the baby's behaviour. A clear, but often unspoken 'manual' of infant behaviour hovered over these encounters, with little acknowledgement, or even understanding, that the behaviours desired are at one end of the biological human infant behaviour spectrum. The search to get babies to conform to challenging patterns of behaviour occupied centre stage. This left little room for fostering the relationship between mother and baby, either in a psychosocial way, or through detailed attention to supporting the unpredictability of breastfeeding.

In the following chapter I focus in on the way the weight chart was understood, and how expectations of weight gain were quite specific and included only some normal growth patterns. This expectation of physical conformity to the patterns of the growth chart mirrored the expectations that the baby would conform to patterns of behaviour convenient to adults in our society.

Chapter 8: THE MECHANICAL BABY

“Breast-feeding is non-technological: the baby is hungry, it nurses, and it is full. The baby grows” (Rothman, 1982, p201).

“In the early twentieth century, [...] we find a conscious, systematic effort to actually turn the child into a biological machine. [...]The impulse towards standardization spread from the factories to homes. Studies revealed that the richness of mothers’ milk depended on the length of time between feedings. Despite the fact that these fluctuations had little or no effect on the child, mothers were encouraged to standardize their own milk. [...] If technology could guarantee the production of manufactured goods, why couldn’t it also guarantee the production of consistently wonderful children?” (Beekman, 1977, p 110-2)¹²⁹.

In this chapter I focus on how mothers and health visitors understood and discussed the weight chart and infants’ weights plotted on it. I begin with noting how the gap between the birth weight and the first health visitor weighing left mothers and health visitors in a limbo, which made it hard to interpret the first weight, but increased the focus on its meaning. I document how, once several weights were recorded, there appeared to be a changeover from understanding weight as a simple matter of regular gains in ounces, to an expectation that babies’ weights would fall along a particular centile. This expectation appears to have arisen, for parents, with the insertion of the chart in the PCHR. Health visitors reinforced expectations that plotted weight would conform to centiles and gave positive messages when it did. The focus was thus not just on growth, but on a narrow band in which growth was felt to be acceptable. Alongside this expectation of following the centile line, the desire to quickly achieve a normative sleeping and feeding pattern, described in the previous chapter, combines to produce an understanding of the baby as a ‘biological machine’ as Beekman (1977) notes in the quote above.

“It was Nearly Two Weeks Without Knowing”

Midwives did not weigh a baby after the birth weight done in hospital in the authority of this study, and health visitors conducted the next weight at their first home visit. Although I did not set out to examine the impact of weighing during midwifery care, many women commented on this as a precursor to explaining how they reacted to weighing by the health visitor. The desirability of frequent weighing in the early postnatal period has been fiercely debated, with its avoidance proposed as a measure to increase the confidence of mothers as they establish breastfeeding (Williams, 2002a; Sachs & Oddie, 2002).

¹²⁹ I have borrowed the title of this chapter from Beekman (1977).

Jean commented that weight “is an obsession from the minute the baby is born” (HV:i), while Tina said “Even in pregnancy...they’re scanning them to see how big they are” (HV:i). Women also noted this focus:

It’s the only thing you can ask about a baby... if you say ‘five and a half’ [pounds] that must get negative reactions (Tessa, 2:1).

Una reported that work colleagues had a sweepstake, with bets on the birth weight of her baby. The majority of women reported that their baby was over the birth weight at the first health visitor weighing. Some said that they knew that it was likely that babies would lose weight, then regain it; “He had stayed the same, but that’s right, isn’t it, ’cos it dips and then goes back up” Kelly (2:1). This caused uncertainty as to how to interpret the first health visitor weight:

She’d put nine ounces on...which I was really quite impressed with, ’cos I thought she’d have lost weight, but the health visitor said because she was just six [pounds] ten [ounces] she probably wouldn’t lose that much (Rosemary, 2:1).

They do say they lose their birth weight -- with her not being weighed ‘til she was ten days old, I don’t really know if she’d really lost any...and I was thinking to myself ‘ooo, did she lose it and has she put some on, and, how much has she put on?’ (Alex, 2:1).

A minimal weight loss after birth and early gains are indications of effective breastfeeding; documenting these could be used to instil confidence in breast milk adequacy. Instead the loss appears to be expected to have negative impact and women understood from their midwives that this is why early weighing is avoided.

My midwife said they know the baby’s going to lose and that’s why they don’t weigh before (Jayne, 2:1).

They don’t want you to get hung up on the weighing idea. I got the feeling that it was due to the fact that bottlefed babies would gain weight more quickly, and they didn’t want to discourage people from breastfeeding (Zoë, 2:1).

In interviews, health visitors indicated their dissatisfaction with the lack of weighing, and described how this might affect women:

I think that causes a lot of anxiety, ’cos so often we go in at 10 to 14 days and they’ve not regained their birth weight. They may have lost more and actually put weight on by the time we come, but you don’t know (Mandy, HV:i).

This mum had been really enjoying breastfeeding and she was absolutely floored and I don’t think any amount of reassurance is going to reassure her that breastfeeding alone will bring that weight back up (Jean, HV:i).

The first weight was seen as an important measure of breastfeeding effectiveness.

It was nearly two weeks without knowing whether she was getting anything or not (Wendy, 2:1).

I nearly rang the health visitor to make sure she was bringing the scales...’cos it had been a fortnight (Jayne, 2:1).

It’s a long time to go with no weighing at all, and then when it’s not what you wanted, you think ‘where did it go wrong?’ and immediately people latch onto the feeding. Definitely in this area, as well, you get the family pressures of, well if she’s breastfeeding, perhaps you should bottlefeed, like we all did (Sarah, 2:1).

In contrast to other women, Tessa deliberately delayed weighing until her baby was six weeks old, saying; “I waited until I thought there would be a significant weight gain rather than a tiny one or a loss” (2:1). Taking this action could risk missing a signal of weight if there were something wrong – either with the baby or with breastfeeding effectiveness. It may be that better explanation of the significance of birth weight regain would make this meaningful to women.

When babies were well above their birth weight, mothers expressed pleasure at learning this. If the baby’s weight was just about the birth weight, the lack of weighing since birth made this hard to interpret. The way in which both women and health visitors spoke about these early weights indicated their power to confirm breastfeeding adequacy or shortcomings. Other ways of doing this were not mentioned, either alongside weighing or in response to weights which were of concern. None of the mothers reported that health visitors investigated breastfeeding frequency or observed a feed in response to weight. Where breastfeeding is effective, a majority of babies will be above birth weight by ten days: although all who are not do not necessarily have a difficulty, it may be warranted to try and investigate to identify any potential problem (MacDonald et al., 2003).

Weighing a baby appears a straightforward act, which will yield information as to the baby’s well-being and breastfeeding adequacy, but women were confused by the scant information they had on weight loss and regain.

Describing Babies’ Weights

In clinic observations I was struck by the frequent descriptions of babies’ growth in terms of the centiles. I had my own children before the introduction of the parent-held chart, and I had learned to talk about weight increases in ounces. However, as I analysed my data more carefully, I saw that the ‘currencies’ of ounces and of centiles were both in use. Questioning

women in phase two allowed me to trace how each woman's orientation to the information depicted in the chart developed over time. The move from clinic card to parent-held record means that, in the last 15 years¹³⁰, parents have moved from holding a record which simply notes baby weight in pounds and ounces¹³¹, to possessing a visual depiction of growth plotted on a chart and a record of the weight in grammes. The effects of this change on how normal infant growth is explained to, and understood by, parents has not been investigated. Previous records allowed **any** weight gain to be seen as positive. With the chart, it may be that a powerful, visual, 'normative' tool has been brought into being. Behague (1993) found that some mothers planned feeding strategies to make sure their child remained in the 'good zone' of the chart, indicating that they relied heavily on the visual clues of the chart. The differences in the shape of growth curves for breastfed babies, means that even normal growth of breastfed babies may appear 'wrong' when babies are expected to conform so closely to the centiles.

Ethnographic observation encourages examination of the material culture of those studied (Spradley, 1979). In this study the chart was one of the most important artefacts. The scale, which was the central object in the ritual of the weighing encounter, belonged to the clinic or to the health visitor; the chart was in the mother's possession, although she was accountable for producing it at the clinic. I will now examine how the chart was discussed and how women used the plotted weight curve in their understanding of their baby's health and the adequacy or success of breastfeeding.

"Following the Line"

By the time the mother brought her baby to the clinic, it was usual for the health visitor to have made two home visits, when the baby was weighed and the weights plotted. Thus even early clinic visits added to a picture already begun¹³², and, as I described in chapter 5, clinic visits all included weighing the baby. Health visitors often commented on the weight they had just plotted in terms of the chart centiles¹³³.

Here's your weight – [speaks to baby] perfect text book aren't you? We could use you to show what the curve is supposed to look like, couldn't we? (Mandy, HV:f).

¹³⁰ Different authorities adopted the PCHR at different times, beginning in 1991. It is not certain that the PCHR is in universal use.

¹³¹ In fact, every Health Authority appears to have done something slightly different. I have a small booklet for each of my children (one blue, one pink), from Redbridge, where they were born, which includes a small copy of the Tanner Whitehouse chart, although no weights were plotted. On moving to Oldham, I was given a simple folded card for my daughter. Even now authorities can vary the content of the PCHR when they order them; no national audit of what is included has been found.

¹³² As I did not accompany any health visitor at a first home visit, I was never present the first time the concept of the chart was introduced to a mother.

¹³³ These comments immediately on weighing did not appear to vary between breastfed and bottlefed babies.

Look at the chart, she is doing fantastic. She is following along the line here (Liz, HV:f).

Tina (HV): He is maintaining his centile.

Mother: Oh he's on his curve, that's good (1:f).

Positive messages were given when a plotted weight fell on the same centile as the previous weight(s), and this was then referred to as the 'baby's centile'. Mothers picked up this idea that one centile is the baby's own. At four months, Zoë told me; "It looks as though we're doing all right, we're following the line still" (2:1).

It may be misleading when health visitors use and reinforce the idea that a baby grows along one particular centile, although Tina told me "a lot do follow the line" (HV:i). Having introduced the concept that a baby's growth will follow one of the centile lines, health visitors have to account for minor fluctuations:

Sometimes you find that happens, you know and you find they put it on all one week and you're surprised... but [it's] not so much the next week (Mandy, HV:f)

Such fluctuations are normal; centile lines are averaged growth trajectories, and no one line represents the actual growth of any individual baby whose growth data is included in the chart. However, the 'shorthand' of describing the weight as following a particular centile seemed to have the effect of emphasising this as the expected and desirable pattern.

Because the pictorial evidence makes a big difference... that is really significant to a mum (Tina, HV:i).

They will look at that chart and they will look at that line and think, 'I am a really good parent, my baby is thriving' (Jean, HV:i).

Sarah, herself a health visitor, expressed how she felt:

You just want to be sure that you're plodding on as you should be. I don't know, because I'm a professional... whether you do become a bit more paranoid about weight, because you're trying to do everything in a pure way, 'you should be stuck on that line' (2:2).

Pounds, Ounces and Stones

To check whether the use of the centile as the measure of weight gain was the only one in use, I investigated the data on the use of weight in pounds and ounces¹³⁴. I found that health visitors did use this measure:

¹³⁴ The initial weight measurement was shown on the scale in kilograms but this was not usually mentioned. A button on the scale converted this to the imperial measure. The PCHR page has two columns for recording weights, one for each measure: I did not investigate whether one, or both, were regularly filled in.

She's 12 lb 8. She's put like 5 ounces on in the last week (Tina, HV: taped at scale).

It may be that discussions with parents before the introduction of the PCHR were conducted mainly in terms of ounces gained and absolute weight in pounds and ounces, and this usage persists. I have found no record of how such discussions were conducted. Liz told me:

When the red books came out, there was a big debate – were we going to do a centile chart in the clinic card and in the book? (HV:i).

This illustrates concerns about handing responsibility for record keeping to the parents (Jackson, 1990), as well as showing that a plotted chart is an important tool for professional reassurance. The issue of changing the way information was given to parents does not appear to have been considered.

Women also made frequent use of pounds and ounces. This was what I had expected to hear, before conducting the study, and so these mentions had struck me less¹³⁵.

She was seven pound three when she was born.... and just really gone...bigger and bigger ... I mean last time she came she were 16 pound 1, so when she said she were seventeen pound eight, I thought 'phoowar' (Kerri, 1:i).

He has put on eight or nine ounces a week (Linda, 1:f)

He's fifteen pounds and two ounces and he's only four months! (Emma, 1:f)

Women used pounds and ounces both to describe the absolute weight attained and the change since the last weighing. Interestingly, although women talked about how much their own baby had been gaining per week, I did not often hear them cite a 'rule of thumb' of so many ounces a week as a recommended gain. This may be because health visitors did not use this, so women did not pick it up from them, but this type of measure has long been in popular use. Sarah, a phase two mother who was herself a health visitor, did say: "in my head I've got 'four to seven ounces per week'" (2:1); and Zoë mentioned "you've got an idea that they're supposed to gain ... about eight ounces a week" (2:1). Such rules of thumb are included in some popular manuals¹³⁶ (Ford, 1999; Byam-Cook, 2001), although others emphasise that babies should have a general overall trend of gains (Renfrew et al., 2004).

¹³⁵ This illustrates the changing nature of the interpretation of data throughout a study in which theory is grounded in the findings. The new findings are alluring and the researcher can be carried away. During analysis of the data, my first impression of the overwhelming use of the centile imagery was tempered and led to my asking women about which measure they found more meaningful, in all interviews in phase two, supplying a much more robust picture of their use by the end of the study.

¹³⁶ Although the actual number of ounces cited may vary.

Relating the Two Measures

At times women used both measures, or compared the two:

Well Daniel started, was it three or four weeks ago, only putting on three ounces, so he's started dropping off [the centile] a little bit (Kelly, 2:1).

You always hear about baby's weights, so you know how much they're putting on and if it's good, but seeing it against the line on the chart does confirm that (Una, 2:1).

Ulrike: When she puts on weight, great, if she puts on six ounces a week, I am happy...For two consecutive weeks she only put on three ounces a week. It makes you feel like, because you want to stop... because you feel like you don't have enough milk ...you get frustrated. But when she puts on weight...it's a bond...

Magda: So you made quite a difference there between six ounces and three ounces?

Ulrike: ...that's what she needs to stay on the line (1:i).

Here, a specified number of ounces' gain hoped for was calculated from the trajectory of the expected centile line. This is similar to the 'grocer's weighing' approach, described in chapter 6. Ulrike noted her strong emotional investment in the gain she looked for. Attaining this would allow her to enjoy the bond with her baby.

Women might use the centile position alone to describe their babies' gains:

Hannah On those graphs she was on the bottom...still is. I think on the twenty-fifth centile, but she is steady.

Suze: Oh, he is on the ninth now.

Hannah: Well she is between the twenty-fifth and the ninth.

Suze: And he was above average when he was born (BG:f).

These babies were several months apart in age, so that the use of the absolute weights might not have allowed easy comparison¹³⁷. Each of these mothers also used pounds and ounces at other times:

I had such a struggle with it, I just got stuck at eight pounds, I could not get her over eight pounds until I gave her a bottle (Hannah, BG:f).

In seven weeks Nicholas didn't gain one pound (Suze, BG:f).

Jayne expressed her satisfaction that her baby had reached the 'milestone' of one stone in weight (2:2); and Wendy mentioned that her baby had doubled her birth weight (2:2), indicated the persistence of even older methods of reckoning. The use of different methods of

¹³⁷ Another interesting feature of this conversation is the inversion of the usual situation in which mothers took pleasure in announcing weights of their babies, which they were happy with. This 'competition' for the worst gain may be a feature of the breastfeeding group where women sometimes vied in describing how many difficulties they were experiencing with breastfeeding. This may have resulted from being in a 'safe haven' where they could talk about the realities of breastfeeding.

measurement might be likened to the continued use of pre-decimal currency terminology after decimalisation. The new measure is the official yardstick, but individuals use the older tally as it continues to have resonance and meaning for them. In particular, several women mentioned that they would use pounds and ounces when telling family members, particularly of the older generation, about the baby's weight, since this was felt to be more understandable for them. I asked women if they showed their PCHR to family members and most said they didn't, just reported on the baby's progress. If this represents a common pattern, this may mean that both measures will continue in use.

"I Can't Say" – Health Visitors and Weights Plotted on the Chart

The plotting of the baby on the centile appeared central to the health visitor's appraisal of the baby. Suze had not brought her PCHR to a visit to the clinic. Jean told her; "What did your health visitor tell you – wherever the baby goes you must take the red book", in a manner which was both 'jokey' yet serious (1:f). On another occasion, a mother came without her book. Tina told her:

I can't say if it's ok, because I can't plot it – you can plot it yourself or I will do next time you come (HV:f).

In the absence of the chart, health visitors were reluctant to commit themselves as to whether the weight was all right. Of course, the point of the book is to allow comparison with the past, to put the weight in context, however, the result appeared to subordinate health visitors' other skills of assessment.

In contrast to this approach in which the chart was accorded authority, Mandy told me:

This mother had been upset because the baby only gained two ounces – it was ok on the chart, but she was upset.... I even weighed the baby again at home – in case the weight had been due to the different scale (HV:f).

Thus, a weight plotted on the expected centile but which was the result of a small absolute change in the number of ounces concerned the mother, and the health visitor responded. The centiles on the chart are a method of depicting a growth trajectory, showing weight change over time. The move to using the chart involves grasping the nature of the design, and abandoning reliance on a number of ounces a week, as the increment will change over time. However, the health visitors did not seem to have developed explicit strategies to explain this. In one case Liz told the mother an older baby: "He has slowed down a bit, hasn't he? But don't panic about that 'cos it is quite normal" (HV:f). Presumably she could have showed the mother that

the curve itself is climbing less steeply. Both professionals and mothers appeared to be somewhat betwixt and between measures.

The health visitors showed me the Health Authority policy on faltering growth; that any baby who crossed over two major centile lines should be referred. This minimal guidance leaves many potential areas of concern uncovered. Liz told me that all health visitors in the authority had received a session on weight monitoring, run by the Child Growth Foundation, some years previously; however colleagues joining more recently had not had this. My own experience of attending a one hour session run by CGF, was that it focussed on accuracy of measurement and equipment, on the early identification of two centiles drop, through the use of thrive lines, and not on interpretation of weight trends or interventions to prevent weight faltering (CGF, 2000). I asked about thrive lines, but Liz told me “this is something that paediatricians would use, not health visitors” (HV:f). It seemed that the charts had a certain mystique and a great deal of authority, but were tools health visitors had not had thorough training in using.

Changing from Ounces to the Chart

I identified the way health visitors and mothers discussed the baby’s weight in terms of its conformity to the lines on the centile chart in phase one; I investigated further in phase two. In every interview I asked; “At the clinic the health visitor writes down the weight and she also puts it on the chart. Do you find one of these more helpful in understanding how (baby name) is doing?”¹³⁸ The responses documented a process moving from an initial focus on pounds and ounces, to weights plotted on the chart in relation to the centiles.

At the first interview with first-time mothers, who were new to the chart, five of the seven indicated that the amount was the measure they looked to.

I’d say the one that was written down made more sense, because the one in the red book, I couldn’t make head nor tail of it, really (Alex, 2:1).

It’s the weight; that line doesn’t mean anything (Paula, 2:1).

Jayne described how an early explanation focussed on her son meant she became oriented to the centiles by the first interview:

The student [health visitor] pointed out that ... he dropped off from his high birth weight and now he’s back up to the same line as when he was born.... So I would probably say seeing it plotted on the graph (2:1).

¹³⁸ See the full list of questions used in interviews in appendix 2.

By the second interview most of these mothers said that they had moved toward using the centiles.

I still like it written down...I do take some notice of the chart ... somebody's explained it and I've read it properly (Rosemary, 2:2).

[It means more now] 'cos when they did his head and his length and his weight, he was all in proportion (Alex, 2:2).

The repeated discussions involving the chart with the health visitors gave it more meaning. Another reason it may have seemed meaningful is that many babies' plotted weight curves followed a centile line clearly. "It's actually sticking to the line, which he wasn't at the beginning" (Paula, 2:2). Previously Paula had told me "He's been on every line so far" (2:1). It appeared that her son's weight had climbed up the centiles, possibly exhibiting catch up growth. Paula did not report receiving any information clarifying this and the centile-crossing confused her. The lack of a depiction of the birth weight loss and regain; and complexities of catch up and catch down growth, mean that the UK90 chart often poorly describes babies' actual growth patterns in the first weeks (Wright, 2002; Wright & Parkinson, 2004).

Second-time mothers would have gone through the process of using the chart with their first baby and most reported that they preferred it from the start:

It might take you a minute to look at it, whereas it would probably take you five minutes to read and add that onto that, so I think it's quicker and easier ... it shows where they've got the underweight, the overweight, the weight that they should be...I think it's just easy to flip over and think 'oh yeah, I'm fine' and flick it back up again (Marie, 2:1).

Nadine, in this group, took part in both phases of the study, allowing a contrast between phase one and phase two interviews. "Most weeks it's been like five or six ounces, occasionally seven or eight ounces" (1:i). "He's keeping on the same line on the chart" (2:3).

Kelly specifically related her orientation to the centiles to experience with her first son.

I'll look at the line...and that's purely because of Mark, I think because we were so concerned with trying to get him out of the blue zone¹³⁹ (2:1).

It seemed that the visual impression of the plotted growth crossing into this part of the chart had had a huge impact¹⁴⁰.

¹³⁹ Kelly is referring to the area between the 2nd and 0.4th centiles, which is shaded in on the weight chart – blue on a boy's chart, pink on a girl's.

¹⁴⁰ Tessa's comment, later in this chapter, reinforces the power of the shaded area at the bottom of the chart.

Sarah, who was on maternity leave from her job as a health visitor, might have been expected to be thoroughly conversant with centiles and to use them as a matter of course. However, during our interviews she used both measures, and told me she felt that the weight gain in ounces was more important.

One week, she'd only put on three ounces, 'cos in my head I've got 'four to seven ounces per week', so it was like ooo. But then the previous week she'd put on about nine, so I could justify it (2:1).

She's a smaller baby and it's reassuring for me that she's following the same sort of centiles as Harry... (2:1).

I asked her which was more important and she said "The weight [in ounces] is... because if you look at my centile, it doesn't look that good" (2:1). Sarah appeared to be using the numbers in a way which would enable her to cope with the worries caused by the low centile her baby was on. This worry, which she reported as stemming from the centile alone, was countered by ways of cushioning herself from the worst interpretation of the numbers.

By the time the babies were around six months old, where they had been weighed frequently, it was easier to see a pattern. Una mentioned that "there's more points" (2:3) as a factor in her taking notice of the plotted line. Some mothers were quite enthusiastic.

I think it's quite interesting...to see it going up...she's followed it quite well all the way through (Rosemary, 2:3).

The process of having weights plotted on the chart resulted in mothers paying close attention to the centiles and using this as a measure of how they were doing. This measure reinforced frequent weighing in order to build up a picture either to monitor baby well being or to produce a keepsake.

The three women who did not weigh frequently provide interesting contrasts. Wendy and Olivia indicated that they relied on their own observations that their babies were growing, and this was part of the reason they did not go for weighing. Tessa had decided before the birth that she would not undertake regular weighing.

All that should matter is that there's some weight gain over the months, and the lines...can be rather off-putting...I think if it goes off the line to a lower line, it looks practically like your baby's ill because those red lines¹⁴¹ are so clear ... [there] is the pressure to keep up with this line. Which I didn't want to do... I wanted to be able to just look [at her] and see that she was ok (Tessa, 2:2).

¹⁴¹ On the chart for girls, the centiles are in red. Compare this with Kelly's description of the 'blue zone' on her son's chart.

Yet, she described her reaction to taking her baby to be weighed (in advance of a visit to her own parents):

I have to say I was a bit disappointed because I thought she'd be about 13 pounds and she was 12 pounds three...I'd thought, from the last check, working the same amount each week...so, I wished I'd waited... after all (Tessa, 2:2).

Although wishing to reject the use of weighing, Tessa still forecast the weight and had an emotional investment in this goal. Her avoidance of weighing her baby did not appear to free her from consideration of the chart.

Understanding the Chart

“On the Average – it’s Ideal”

There was strong positive feedback from health visitors when a baby’s weight followed a particular centile, and this became important for mothers. At the same time, all centiles were not equal, some were more desirable than others. A number of women expressed particular satisfaction since their babies’ weights followed the fiftieth centile, while others were pleased that their babies were on high centiles. Women who mentioned that their babies were following centiles below the 50th tended to find this less satisfactory. Tina told me:

And as much as you say to a mum, ‘look it really doesn’t matter, the whole chart is normal and it’s watching that the baby finds a pattern and continues on that pattern that’s more important than actually worrying about where they are on the graph’, you will get some mums that will be concerned because their baby’s on the nought-point-three centile, not on the seventy-fifth like the girl next door (HV:i).

Women appeared to be particularly pleased that their baby’s weight was tracking on, or near, the fiftieth centile.

She was a big baby when she was born... the weight just went a bit down....She went right on the normal line (Ulrike, 1:i).

They say that what she’s putting on, she’s in the average, its ideal (Alex, 2:2).

He’s spot on the medium line, the fiftieth centile (Una, 2:3)

Some women mentioned lack of worry about obesity as one perceived positive aspect of being on the fiftieth centile:

I am pleased she is on the fiftieth, with me being heavier, I might be giving her milk that’s on the fatter side and it could be a cause of concern (Zoë, 2:2).

[Describes how the baby's weight has fluctuated] But he's still below the middle-y line, so he's not overweight or anything (Kelly, 2:1).

As noted in chapter 2, the growth curves of a breastfed baby in the early weeks rise faster and higher than those of the standard charts. Normal breastfed baby growth could appear 'too high'. Paula, whose baby was first plotted on a lower centile, said that she felt better once her son had not only settled on a centile, but that it was on the 'normal' one. This had happened after she started supplemental formula feeds.

As long as he is following a line I think that's all right; he's not losing any and he's not gaining too much, just steadily... at the beginning when I was just purely breastfeeding, that's when it was just not really following any lines, then it started getting pretty normal really [on the fiftieth centile] (Paula, 2:2).

It is a matter of interesting speculation how this might affect her feeding choices with another baby. Her use of 'normal' indicates that the chart has not been well understood. However, this could be due to messages received in clinic:

I'll show you how he's doing on his chart. He's doing really well, fantastic. He's going on the fiftieth centile here, that's average, he has settled there (Tina, HV:f).

Below the Fiftieth Centile

Women whose babies were growing on centiles below the fiftieth found this concerning:

Hannah "On those graphs she was on the bottom...still is. I think on the twenty-fifth centile, but she is steady (BG:f).

They [both children] start off on the second or the ninth centile...It's like this big deficit (Sarah, 2:1).

The likelihood is that most children with severe growth difficulties were excluded from the data used to compile the UK90 chart (Sachs et al., 2005). Thus, a baby tracking along even a relatively low centile is probably growing normally, unless there are other indicators of concern. Liz stated how the centiles should help parents see this:

It makes more sense of the whole business of looking for health and growth if you are able to talk about the centiles, and looking at growth patterns... explaining that all these lines are normal and how this percent of the population and that's what it means. And it's ok to be on that line and it's ok to go on that line (HV:i).

These mothers, however, appeared to feel it was **not** acceptable for their babies to go onto lower centiles.

Women who had babies whose weights were on higher centiles did not usually mention concerns about obesity, and found satisfaction in the size of their babies.

I did get quite a kick out of looking at where David would be on the chart. I mean he was at the ideal for five to six months when he was three months. I must admit I did show my husband and said 'look, it's not just me saying he's a big baby' (Olivia, 2:3).

Nadine was satisfied with her son's growth on the ninety-first centile, while Suze, whose baby was just as far from the average on the ninth centile, was concerned. For women whose babies were near the fiftieth centile, pleasure was expressed that their babies were neither too small nor too large. Thus, while tracking the shape of the centiles was valued, a narrow part of the chart was conceived of as being desirable. Over 90 years ago, Cran (1913) noted:

"Many a young mother worries if her child has taken 10 or 15 grm more than she was told to give it, whilst another grieves because the figure demanded cannot be attained. And so the weighing machine becomes an instrument of torture as much to the mother with plenty of milk as to the one whose lactation is poor" (p1659).

Nearly a century later the 'instrument of torture' has been joined by the pictorial image of the chart. Although the women I studied came from a different culture from the women studied by Behague (1993), their experience confirms the powerful visual impact a chart can make on how a mother feels about her baby's weight, and, by extension, well-being.

Who is Being Measured?

The baby's performance on the chart had great emotional meaning for the breastfeeding women in this study. It is notable that the mothers talked about 'my line', perhaps indicating that this was a measure they applied to themselves. Ulrike told me:

When she puts on weight, great, if she puts on six ounces a week, I am happy ... it makes you feel like carrying on (1:i).

She didn't put any weight on at all last week, so I'm quite...intrigued [baby is weighed and has gained five ounces]... mmmm, that's kept us happy, then (Bethany, 1:f).

Val described her pleasure at the first weight:

It gives you a good sort of indication. If they are putting on weight. 'Cos that's what I was worrying more than anything, is he getting enough off me and is he gaining weight (2:1).

In the clinic, I frequently noted the pride and pleasure in women's voices as I observed their reactions to weight gains they regarded as good. Often they expressed this by speaking to their baby:

Nearly an eleven-pound bouncing baby!!! (Exultation and glee) (Anne, 1:f).

“Twelve pounds, twelve pounds, twelve pounds” she croons to the baby as he sits in the scale (Carol, BG:f).

Wendy and her eight-year-old daughter told me how they received the first weighing:

Wendy: We’d been looking forward to that, hadn’t we?

Angharad: When she first came I was like this to her ‘when are you weighing the baby? Will you weigh the baby, will you weigh her?’

Wendy: ’Cos she were only weighed when she were born and we didn’t get her weighed again until last Friday.... [to baby] And you had put on eight ounce, hadn’t you? (2:1).

One exchange highlighted how weight could stand in as the measure for well-being.

Magda: How are you? He looks well.

Fran: He’s nine and a half pounds, yesterday (BG:f).

The increasing weight gave women confirmation that breastfeeding was ‘working’.

One week he put 14 ounces on...They just said I’ve got some super-doooper milk going on (Marie, 2:1).

You know they’re putting on weight and they’re actually getting what they’re supposed to (Wendy, 2:1).

When you’re breastfeeding, you’re not 100% convinced of how much is going in, are you? It is the only way to tell, you need that reassurance that you’re doing all right (Sarah, 2:1).

Rosemary’s husband came in to our first interview for a few minutes, and commented:

It’s just nice to know that she’s putting on weight and that Rosemary’s doing everything right (2:1).

These comments blend together an assessment of the physical effectiveness of breastfeeding with a sense of doing a proper job as a mother. Breastfeeding effectiveness may depend on the quality of information and practical teaching women receive about breastfeeding technique (Renfrew et al., 2000), and the physical ability of the baby to suckle (Lothian, 1995). However, mothers here seemed to assume full responsibility.

Tessa was the only mother in the study to mention the difference in growth curves based on breastfed or bottlefed babies.

One thing I found out was that the charts were written for bottlefed babies...and I think bottlefed babies have been generally fatter and... grown more steadily (2:2).

Given the evident pleasure and confirmation of a task well carried out when weight gain was seen as good enough, or better than good enough, weight gains that were lower than expected were greeted with worry.

If the baby is on the bottle you feel there is something wrong with the baby, but if she doesn't gain weight you think is there something wrong with her or is there something wrong with me? (Ulrike, 1:i).

Sarah, whose daughter was growing along the ninth centile, told me how it felt as she approached each weighing (which she did herself); "when I put her on, I think 'Oo, has she put on enough?'"(2:1). Sarah also weighed in kilograms and converted into pounds and ounces "so it doesn't shock me as much... It sort of takes the edge off" (2:1).

Each weighing episode, narrowly defining success as the baby growing along the previously plotted centile, is set up as a mini-test of the mother's breastfeeding adequacy and ability to sustain the growth of her baby.

In the breastfeeding group two women discussed the weight of a baby:

Kirsty asks Suze if the baby has put on, Suze replies that he has, but she is concerned that it isn't enough.

Kirsty: Who can say what is the right weight?

Suze: I looked at the graph, it's the graph (BG:f).

The chart is thus accorded ultimate authority.

Conclusion

The evidence from this study has documented that the understanding of infant weight gain may have shifted from amounts in ounces to an expectation that weight will follow the shape of the centiles on the UK90 chart. This change is speculated to have happened with the inclusion of the chart in the PCHR, and it was noted that women became inducted in this understanding over the first months of clinic attendance. Health visitors and women spoke about the plotted weight, revealing an expectation that growth would follow a particular centile, and that fluctuations from this could be of concern. In addition, although the chart is based on normal babies, the fiftieth centile appeared to be understood as the most normal line for growth, rather than the statistical middle of a population. Babies growing along lower centiles, particularly those in the bottom quarter of the chart, caused some concern. Babies growing along higher centiles were generally not of so much concern. This latter finding may reflect a traditional preference for chubby babies and may change as current social discussion of the problems of childhood obesity is incorporated in women's understandings.

The exchanges between women and health visitors, and the remarks women made in interviews, resulted in an overwhelming impression that feeding was conceived of a process mechanically fuelling the production of growth. The impetus to change aspects of feeding in order to bring the baby into line with the norm of the chart is examined in the next chapter. Actions taken for this purpose should be understood in relation to the narrow limits of what was accepted as good enough baby weight gain. As revealed, the mechanical baby is understood to require mechanical, regulated feeding, with breastfeeding fitted around the central purpose of “putting milk into babies” (Churchill, 1943). The consideration of breastfeeding as an embodied relationship between two individuals is almost absent in this understanding, and this absence is explored in chapter 11. The emphasis on attaining weight gain in an orderly manner, which I described in chapter 5 and analysed further in this chapter, provides the context for the exploration of the ritual of the weighing interaction itself, in chapter 10.

Chapter 9: FEEDING BY NUMBERS

“With regard to the question of how to ensure that the infant receives the quantity of maternal milk which is prescribed for him [...] There is only one possible way, and that is by weighing the nursling” (Pritchard, 1904, p20).

“The question of three- or four-hourly feeds has to be decided for each baby. [...]The length of time at one breast should gradually be increased to six, eight, and ten minutes, but not longer. [...] In a few days a regular rhythm will be established, both in the receptive organs of the child and in the producing organs of the mother. [...] If by the fourth or fifth day baby is still unsatisfied, nurse can prepare in a 2-oz. medicine glass a *supplementary feed*” (Langton Hewer, 1936, p22-3; emphasis in original)

“I have found the 7am to 7pm routine to be the one in which tiny babies and young infants are happiest. [...] In the very early weeks to avoid more than one waking in the night you must fit in at least five feeds before midnight” (Ford, 1999, p96).

“Your newborn baby should breastfeed 8 to 12 times each 24 hours. [...] Your baby should have 4 or more bowel movements each day. [...]The only way to be absolutely certain that your baby is getting enough milk is to have him or her weighed regularly” (Neifert, 2004, p674).

These strictures, taken from advice manuals¹⁴² spanning the 20th century, illustrate how breastfeeding has been included in the regularisation, standardisation and quantification of infant feeding. Set intervals between feeds, timed feeding durations, curtailment of night feeds, and evaluation of the adequacy of breastfeeding through weighing are all deeply embedded in cultural expectations. The strong expectation that babies’ weights will conform to chart centiles means breastfeeding needs to prove that it ‘measures up’ as a method of getting quality milk into babies.

What happens when the weight of the baby does not meet the norms of the chart? The WHO project to produce a new growth chart is based on the premise that more realistic growth norms will ease interventions involving giving supplements (de Onis et al., 1997). It is not clear, however, how much difference this would make or how involvement in regular weight monitoring actually affects women. In chapter 2 I noted that the literature which suggests that women turn to formula or other supplements to breast milk, but the process of making such decisions has been little examined. Data from my study offer insights into this. In this chapter, I present what women told me about offering substances other than breast milk to their babies in order to influence weight gain. I asked at every interview in phase two whether women had offered anything other than breast milk from the breast, so I heard of the many other reasons to

¹⁴² The fourth is actually from a patient handout included as an appendix to the paper cited.

do this. The 'interventions' in response to weight are therefore placed in context. Overall, understanding of babies' needs and approaches to feeding appear to be heavily shaped by the 'numbers approach' revealed in the manuals.

Mechanical Breasts

In speaking about breastfeeding, women mentioned themselves as milk providers in mechanistic terms: "Daddy's the playing bit, and I'm the milk machine" (Ulrike, 1:i); and "You feel like a milk float" (Rosemary, 2:3). Marie said "I just feel like a cow on demand" (2:1), evoking an image of milking in an industrial parlour.

An understanding of breast milk production was lacking: Suze asked; "Does it run out during a feed or is it made all the time or what?" (BG:f)

I was finding I was quite empty at night, so he was feeding for hours, I think there was nothing there for him. So, what I do now, is in the morning I'm quite full and I express a bottle (Paula, 2:1).

Women commonly experience fluctuations in the volume of milk in their breasts over 24 hours. What has not entered popular understanding is that calorie content of the milk, due to variation in fat, will fluctuate as well. Frequent feeds on a relatively empty breast are likely to have a higher fat content than those from a full breast which has not been fed from for hours (Daly & Hartmann, 1995a, b; Hartmann, 1996; Mitoulas et al., 2002; Ramsay et al., 2005). The level of breastfeeding knowledge was illustrated in this exchange:

Tessa: My neighbour asked: 'What will you do when you need Progress¹⁴³' – meaning how will your body cope?

Magda: Many people don't realise that breast milk varies through a feed, the composition at the start is affected by how long since the last feed, the time of day, how much baby took at the last feed...

Tessa: I didn't know – and I read and am interested, so it's an indictment of our culture, when knowledge about breastfeeding is so scarce (2:3).

Tessa had breastfed her first daughter for two years, and attended LLLGB meetings; her knowledge was well above the average. The idea that a satisfying feed is one where the baby slakes his need both for fluid and calories (which in itself is mechanistic, but includes an understanding of some of the variability of breastfeeding physiology), and that a baby can be trusted to feed to satisfy his requirements, if offered effective, frequent access to the breast, did not often appear. Rather, feed adequacy was measured in time. Olivia, whose baby grew rapidly, said:

¹⁴³ The neighbour is referring to the brand name of a 'follow-on' formula milk for babies over the age of six months.

She didn't even feed for a long time, because people used to think she had been feeding for an hour but she only had ten minutes, and she only had one breast at a time (1:i).

This comments reveals an understanding shaped by feeding schedules and a focus principally on the amount of milk the baby receives.

What Women do when Weight is not 'Good Enough'

Weighing the baby forms the focal point for clinic visits, as noted in chapter 5. In chapter 8, I showed that the outcome hoped for is that weight follows a single centile – preferably the fiftieth – of the UK90 chart. When this does not happen, women may respond in a variety of ways, including supplementing breastfeeding.

Renfrew et al. (2000) assert that “there is insufficient research to guide decisions about which [breastfed] babies may genuinely need additional feeds” and what level of weight loss should “result in supplementation” (p43). In the vacuum of evidence, practice may vary widely as to what individual practitioners suggest and what mothers do. Powers (1999, 2001), identifies a number of interventions in breastfeeding technique or ‘breastfeeding style’, which may improve infant weight gain. These are focussed on ‘efficient milk transfer’. Discourse in the clinic shared this mechanistic model, but lacked the detailed understanding of recent breastfeeding research, while also failing to clearly value and prioritise continued breastfeeding.

I present the actions women in this study took in response to concern about weight. As noted in chapter 2, this is just one of a range of reasons given by women for supplementing or abandoning breastfeeding. Table IV shows all the reasons women in both phases of this study gave for offering their baby anything other than breast milk through breastfeeding. This was collated from mentions in phase one, while in each phase two interview, I asked women what they were giving, prompting to see if they gave expressed milk, water or colic remedies¹⁴⁴. In this table, the weight-related reasons of giving supplements form only part of the picture. This agrees with survey findings (Hamlyn et al., 2002).

The information in Table IV shows the wide range of reasons for offering supplements to breastfeeding. I will not discuss all of these further. I focus on the actions women took in order to influence their baby's weight in detail, and discuss some of the other reasons to provide the context for these decisions.

¹⁴⁴ Culturally, these are not considered to alter feeding method, however, these alter the defined feeding pattern according to WHO definitions (Labbok & Krasovic, 1990). My questions can be seen in appendix 2.

Table IV: Reasons Women in the Study gave for Supplementing or not Supplementing Breast Milk through Breastfeeding

The items in each box are not in an order of importance – all reasons mentioned by women are given, some were mentioned by several women, some only by one. Reasons related to baby’s weight are in bold for emphasis. The result is to show that these are only a small part of the picture.

	Early weeks	~6 –12 weeks	12-16 weeks	16 weeks – 6 months
Reasons to give formula milk	To introduce bottle Baby feeding frequently (?not enough breast milk?) Suggested by others if feeding painful Baby not gaining enough weight Baby lost a lot of weight from birth	Baby hungrier, feeding frequently To have a break / go shopping / go to yoga, etc & expressing not working out To get baby to sleep at night Baby not gaining weight	Baby feeding more frequently Going back to work, planned change-over to full formula feeding Might have to, in order to improve baby’s weight gain Husband can do more feeds	Might be needed if milk declines due to mother-baby separation on return to work [sometimes anticipated work routine imposed beforehand as preparation] Used while mother at work As a drink if needed, as expressing not very viable Baby not gaining as well as before
Reasons to give expressed breast milk	To introduce bottle Baby in hospital – staff want to see how much baby is getting To feed baby when out shopping	To involve dad Social evening out To get baby to sleep longer at night Strategy for keeping up breastfeeding long-term To introduce bottle To allow others to babysit To avoid breastfeeding in front of others To know that there will be three hours between feeds	As 6-12 weeks, also: Continue on regular basis to keep baby used to a bottle, even if particular reason does not apply at moment Anticipated might try if baby still waking several times	Baby to have while mother at work
Reasons to give colic remedies	Too young for gripe water Baby a bit windy	As needed / regularly baby windy, won’t settle		

Reasons to give 'solids' / complementary foods	/	HV suggests (at nine weeks) that solids may soon be needed because baby is large	Baby hungrier – feeds more frequently Weight falling down the centile – solids rather than formula Started first child at 13 weeks Ends vulnerability of being solely responsible for baby's nutrition Might be an alternative to the bottle when working Novelty of giving solids anticipated Baby 'looking longingly' at others eating	Baby is now 'right age' [16 weeks / 18 weeks / six months] Baby interested in what other family members are eating Novelty of giving solid foods anticipated Baby prefers solids to milk
Reasons to give water	Baby has a cold	Alongside formula To increase inter-feed interval Relative fears baby not getting enough from breastfeeding	/	/
Reasons not to give anything other than breast milk	Pride and satisfaction of 'doing it all' Baby might get too fat on formula Didn't know if you could give water or colic remedies	Pride and satisfaction of 'doing it all' Expressing is time-consuming and fiddly Keep night breastfeeds because they are easier than a bottle	Pride and satisfaction of 'doing it all' Expressing is time-consuming and fiddly	Pride and satisfaction of 'doing it all' Expressing is time-consuming and fiddly – especially when back at work Weaning books say give milk in a cup, but 'why bother?' Delay starting solids as away from home (and weight ok, so no urgency felt) Limit other drinks to prolong breastfeeding duration to 2 years Have to resist pressure from HV to get to six months before solids

Types of Action taken to Influence Baby Weight Gain

Women responded in a number of ways when they were concerned by their baby's weight gain. These concerns could be prompted by small fluctuations off the centile the baby had previously been following.

Table V: Types of Action Taken if the Weight was of Concern

Action taken when infant weight is of concern = 'intervention'	Comments
Expressed breast milk	
Formula	
Solids / complimentary foods	
'Worrying'	
Changes in weighing frequency or practice	Frequency changes could be either an increase or decrease.
Evaluate and change breastfeeding technique or frequency of feeds	Largely absent

Expressed Breast Milk

Expressing milk to simultaneously stimulate supply and to use as a supplement is suggested in cases where weight gain is of concern (Powers, 1999; Mohrbacher & Stock, 2003), although this is not based on research evidence (Renfrew et al., 2000). Zoë's baby was discovered to be 12 ounces under her birth weight at the first postnatal health visitor visit and readmitted to hospital. Zoë reported:

I expressed my milk so they could see what she was getting, and she was bottlefed with my milk ... she regained her birth weight by the time we came out.... [in the end] they were happy the supply was ok (2:1).

Expressing milk in this instance appeared to be more so that the hospital staff could monitor the amount of feed the baby was taking (although there it is not clear how they would decide on how much breast milk a baby requires). Zoë increased feeding frequency, but only after receiving another suggestion from staff of limiting the time at the breast. Interestingly, she went on to breastfeed with great confidence. The external assessment of her milk gave her a feeling of security that she was providing enough.

Zoë herself ascribed her success to being an older mother with the self-confidence to get answers to all of her questions. Anne, a first-time mother in phase one, also described an early large weight loss of a pound in three days¹⁴⁵. This large fall she later attributed to differences in scales on which the

¹⁴⁵ Anne's baby was born in a hospital in a neighbouring Health Authority where the community midwives did weigh babies.

baby was weighed. In response, she did not express, but offered formula supplements and rapidly moved through combining to full bottlefeeding. I noted on page 147, that Paula mentioned using expressing in response to her perception that her breasts were empty at night. When I phoned Paula a few weeks later, the bottle of expressed milk had become formula milk and she was mainly bottlefeeding.

Morse and Bottoroff (1988) found that if disappointing volumes of milk were obtained in early attempts there could be negative emotional and practical consequences for women and their babies. Expressing is a skill which requires an effective technique and practice (Mohrbacher & Stock, 2003; Renfrew et al., 2004; Ramsay & Hartmann, 2005). It appeared that women received little help: none mentioned being taught how to express by hand, and they were left to purchase a pump and teach themselves. Several mentioned that they had not mastered the skill.

Formula Milk in a Bottle

Women giving their babies expressed breast milk gave it in a bottle, but in general 'bottlefeeding' refers to giving formula milk¹⁴⁶. As listed in Table IV, women mentioned many reasons for introducing formula feeds. At every age, frequent feeding was an issue. Women may have heard that babies fed often in the early weeks, but were overwhelmed by the reality. They also appeared to expect that there would be steady progress to a feeding pattern that was both regular and involved longer interfeed intervals.

We've had a few ups and downs, just to cope with demand at first, but now he's steadily getting into a better pattern (Val, 2:1, baby four weeks old).

Sometimes you just feel that whenever he's awake he thinks he should be feeding. You just want to know that that's normal for newborn babies and ...you want to know what babies should be doing (Jayne, 2:1, baby four weeks).

With expectation and reality conflicting, women gave formula in an effort to help achieve less frequent feeding.

I put her on the bottle before Christmas because... she just wasn't getting enough off me...she'd go every two hours and she was feeding for an hour (Alex, 2:2).

He's decided he's getting hungrier and hungrier, so he's now on two bottles a day, isn't he, but that's his choice, not mine... I was feeding him and feeding him (Nadine, 2:2).

I thought 'I have the choice, I could feed him through the night'... and I said 'no, if I get him off me now, I think it will be better' (Marie, 2:2).

Rosemary described how she might have chosen to give a bottle:

¹⁴⁶ Women may provide expressed milk in order to have time away from their babies, or they may use breast milk in a bottle to 'introduce' a method seen as part of the normal progression in infant feeding (Hörnell et al., 2001; Shaw et al., 2003)

At about eight weeks, she was still waking up twice in the night, and one of the girls at the breastfeeding group was saying when her baby was 12 weeks, she gave a bottle of formula when her baby went to bed ... and she then went through the night. I was getting to the stage of thinking 'if this is still happening at 12 weeks I might introduce a bottle of formula', but I haven't because it's just once a night now (2:2).

Even in a group of Swedish mothers committed to breastfeeding, who had breastfed before, increasing sleep at night was a reason to give formula (Hörnell, 2000).

In the context of this readiness to turn to formula to influence infant behavioural issues, women mentioned using it to improve the baby's weight gain.

It's [weight] really slowing down, so I don't know whether my milk's not enough for him, we'll see in the next couple of weeks... we're going to move to it anyway, aren't we, so it's just a question of when really (Kelly, 2:2).

Paula said several large weekly weight gains influenced her: "It means obviously he's feeding well, I don't have to worry about trying to find an alternative feed" (2:1).

A number of women reported that a health professional suggested giving formula to improve weight gain.

I had such a struggle with it... I could not get her over eight pounds until I gave her a bottle at night. My health visitor suggested it, for my own peace of mind (Hannah, 1:f).

In seven weeks Nicholas didn't gain one pound. They said at the clinic when I had him weighed that I could give him a bottle before bedtime... The doctor said that I could do that if I was worried (Suze, BG:f).

Both these mothers represented the suggestion as being made to allay their fears, rather than because the health professional was concerned for the physical well-being of the baby. Health visitors themselves located the impetus to introduce formula with family forces.

And then their mothers and friends say 'oh, just give it a bottle. That's what it needs, just give it a bottle'... and they're tired and upset and run-down and the baby's not putting weight on and is crying all the time. Give it a bottle, and then it will stick in its tummy and they'll all smile and say 'isn't that wonderful?' (Tina, HV:i).

Jean reported; "I suggested cool boiled water, or maybe she could give formula if the feeding is becoming an issue at that one feed" (HV:f) and sometimes health visitors were heard to suggest formula:

Rachel: [describes how she is sore and her baby is feeding frequently] I am just on the edge of giving up.

Tina (HV): Well there is no reason not to give one bottle – one night's sleep and you will feel like a new woman. It won't harm him (BG:f).

Health visitors told me that there was no local protocol for establishing when formula might be an appropriate intervention to suggest. I discovered no published protocol for offering formula in cases

of poor weight gain, nor a care plan for transitioning back to breastfeeding once weight deficit has been recovered.

Kramer et al. (2004) documented a distinct increase in weight for age in babies who received formula or other milks in addition to breastfeeding, especially in the period between three and six months. The UK90 growth chart is likely, in these months, to be based on data mostly from babies receiving formula supplements or formula milk only. Thus, the desire to attain growth which follows the centile increases the impetus for feeding patterns which produced that growth. Swedish breastfeeding mothers considered they breastfed on demand (as did the women in the current study), yet the frequency of feeding and of night feeding varied markedly (Hörnell et al., 1999). Ball et al. (1999) documented that it was rare for babies in the Northeast of the England to sleep through the night during the early months; with breastfed babies continuing to wake for longer than those who were formula fed. In the absence of clear, consistent information, repeated over time, that such patterns are normal and not harmful or indicative of long-term problems for the family, biologically normal infant behaviour is likely to be seen as unacceptable, inexplicable, even pathological (McIntosh, 1985; Armstrong et al., 2000; Douglas, 2005). As long as the sleeping and feeding patterns of babies fed artificially are considered culturally normal and therefore physiologically normal, formula use will appear alluring.

As indicated in Table IV, women gave many other reasons to offer formula:

Just to get used to having a bottle for when I go back to work...And to give me a break sometimes (Nadine, 2:1).

She's had about two or three bottles...Just to see if she would really (Sarah, 2:2).

Such comments indicate that formula is understood as a fairly benign change from breast milk, and that women largely expect to use it at some stage. Tessa, who breastfed her first daughter for two years and planned to breastfeed exclusively for six months, noted the force of expectation: "My neighbours have been saying to Bryony 'are you going to help mummy with the bottles?'" (2:1).

Offering 'Weaning' Foods

At the time of the study, the recommendation in the UK was that 'solids' or complementary¹⁴⁷ foods be introduced between four and six months of age¹⁴⁸ (DH, 1994). In practice, most women in this study gave their baby a first spoonful at the start of the 16th week. Several UK studies have found that

¹⁴⁷ The term 'complementary food' has been defined as "any food [...] suitable as a complement to breast milk or to infant formula, when either becomes insufficient to satisfy the nutritional requirements of the infant" (WHO, 2003, p 115).

¹⁴⁸ I will refer to this process as 'weaning'. This term is potentially confusing, as it could refer to weaning off the breast onto formula, or to weaning an older toddler off the breast, months or years after he or she is eating a full 'normal' diet; however, it is the term most commonly used in the UK, and all the mothers and health visitors in this study spoke of 'weaning' as the introduction of solid, or non-milk, foods.

the median age of weaning is below 16 weeks, but women who breastfed tend to start weaning later than those who formula fed (Savage et al., 1998; Anderson et al., 2001; Wright et al., 2004). I noted that many discussions took place about weaning. Health visitors also appeared to approach weaning as a key moment for support, offering weaning home visits. If women indicated that they were ready to start considering weaning, time would be made in clinic to discuss this, or a home visit arranged. This contrasted to the way breastfeeding difficulties were treated: as discussed in chapter 7, it was rare for visits to be arranged to evaluate and improve breastfeeding techniques.

Women spoke of offering solids to increase the weight gain of their babies. Many weaning foods are low-density and may provide fewer calories per gram than milk, so the potential to increase weight is likely to be limited. Hörnell et al. (2001) noted that the regular introduction of formula milk led to a rapid decline in breastfeeding duration, while the introduction of solids appeared to truly complement rather than supplant breast milk.

Sarah, herself a health visitor, with a baby growing on the ninth centile, said:

I needed to start her on solids at 16 weeks, 'cos she was needing to feed a lot more to be satisfied.... I got to 16 weeks and I was happy to get to 16 weeks... (2:2).

This strong perception of a marginal supply during the first months of breastfeeding with solid feeding as a support for continued breastfeeding was shared by Kelly. Her baby was growing along just below the fiftieth centile, but after three months, his weight began to fall slightly in relation to the centile. This is, in fact, the expectable difference in centile shape for breastfed babies, but Kelly did not mention having received this information. She was not so much worried about the pattern of this baby, but was anticipating the possibility of repeating the problems she had had with her first son, who “fell into the blue zone” (2:1). She had responded with a traumatic transition to supplemental bottles and then full bottlefeeding.

Last time I was just so, ‘I want to carry on breastfeeding’, I mean I do want to carry on breastfeeding, but not at the expense of his weight gain.... When I spoke to [health visitor] I was thinking maybe I ought to be trying a bottle, but she said to try a little bit of solids (2:1).

At the next visit, Kelly spoke of contradictory influences. The weight was still falling away from the line, however, her older son, now two years old, had started eating much more substantial meals in the last few weeks; “and I think that’s made me relax” (2:2).

For both Sarah and Kelly, supplemental solid foods helped take them feel that there was something they could do when they felt their milk supply was unable to meet their babies’ needs. Kelly mentioned her health visitor suggesting solids; Bethany also received such a suggestion, when her baby was 14 weeks old:

Last week she only put an ounce on so they said I might have to start weaning her, the nurse that I've seen last week (1:i).

However, a gain of eight ounces meant Bethany felt she could leave solids until later. A few weeks after this, she mentioned her expectation that the move to first solids would make a big difference in weight gain. This idea was held by health visitors:

It wouldn't be unusual for health visitors to say, 'well you could start weaning and that may help'. We would view that to be more positive than introducing formula (Liz, HV:i).

Kelly's story illustrates the multiplicity of influences on feeding decisions. Several second-time mothers described experiences with their first baby shaping decisions for the current baby. While previous experience has been identified as an influence on possible initiation of breastfeeding with second and subsequent babies (Hamlyn et al., 2002), these further influences are little explored. Mothers and health visitors in the study did not mention discussing previous feeding experiences in an anticipatory way, in order to devise preventative strategies or to better understand how weight patterns (or other matters) of concern had developed.

Changes in the Pattern of Weighing

Some women and health visitors mentioned altering the frequency of weighing in response to weight concerns. For some, a lack of gain at one visit could result in a need to weigh again soon. Bethany said: "I'll have to be here ... because she's not put any weight on" (1:f). Olivia told me:

I guess I will go once a month, for the first six months or so. Maybe if I do not think he is growing, I would go every other week (2:1).

In the event, her baby grew well, and she rarely weighed him, but at six months she said: "if there is a problem, then you can weigh; weigh if there is a problem" (2:3).

In this study many women weighed frequently: it would have been hard to weigh more often, but Sarah (who had her own scales) said:

I did it once a week 'cos I think that's enough, because if you do it more than that it can freak you out even more, every little blip, if they haven't put an ounce on in a day, you'd be wondering why (2:2).

In contrast, other women mentioned less frequent weighing as a response to weight worries:

They say if it gets you worried, with the weight, don't do it every week. And when she was only putting on three ounces, I dropped a week, because it was getting to me (Ulrike, 1:i).

Tessa, who decided in pregnancy that she would not weigh frequently, might be considered to exhibit this response taken to a strategic level. This was in reaction to the emphasis on weighing she

experienced four years earlier with her daughter. “I wanted to be able to just look and see that she was ok” (2:1).

Health visitors also mentioned less frequent weighing:

Liz, she’s got one who’s still not regained the birth weight and she’s told the mum not to come to clinic for two weeks¹⁴⁹... it’ll be interesting to see if the mum can stay away (Mandy, HV:i).

I would usually say; ‘I would suggest that I wouldn’t rush to have the baby weighed too quickly, so giving yourself time, and time for getting things going again’ (Liz, HV:i).

Mandy noted:

Once ... they’ve lost weight, it is hard then to say ‘that’s fine, we’ll see you in a month’. You want to say ‘come back next week and see how you’ve got on’. Partly maybe, that’s reassurance for us, I don’t know, but mainly to reassure mum. Hopefully when you see her next week they’ve gained. Or not gained -- that’s very difficult (HV:i).

Such comments suggested a reliance on the weighing ritual itself to provide the reassurance, as further discussed in chapter 10. Although Mandy went on to describe suggestions she would make to a mother about resting and eating well, there was a sense that she hoped breastfeeding would sort itself and the weight gain out. Changes to weighing could almost be seen as theatrical ritual flourishes designed to draw attention to the great care being taken in this matter which might involve a threat to the baby’s health.

Two health visitors reported using more rigorous weighing practice in response to disappointing weight gains:

This mother had been upset because the baby only gained two ounces – it was ok on the chart, but she was upset... I even weighed the baby again at home – in case the weight had been due to the different scale (Mandy, HV:f).

I did say, don’t come to clinic, I’ll weigh on the same set of scales, ’cos the scales can all differ... And I’ll weigh him next week and we’ll go from there... I strongly feel that he’s probably had a few bottles, between me going next week....And he will have gained weight (Jean, HV:i).

This indicated awareness that standard practice could yield weights which were misleading, but this information was not regularly shared with women. Jean’s remarks also point to an interesting avoidance of responsibility, indicating that she expected a mother to use formula, but did not offer anticipatory guidance on how much to give, how to offer it to provide the least disruption to breastfeeding¹⁵⁰, or how to reduce supplements once weight gain was achieved – or parallel strategies to improve the efficacy of breastfeeding. An opportunity was lost to suggest that formula could be a

¹⁴⁹ It is of interest to note that the difference between the initial birth weight loss and regain, which I have argued is an important first indicator of breastfeeding adequacy (Sachs & Oddie, 2002), is not clearly distinguished from later patterns of slow weight gain.

¹⁵⁰ Suggestions might be to offer only a certain amount; only at certain times of day; only after an unrushed breastfeed (Mohrbacher & Stock, 2003). Such suggestions are based on clinical practice, not research studies.

temporary intervention, where needed. Nor did she mention offering information on possible health consequences of introducing formula. Tina expressed the dilemma of health visitors:

If it hasn't put on a lot of weight, you're on that roller coaster, where they haven't put weight on and mum's concerned, and you're having to go back, and you're having to weigh it, because they want to know why it's not put weight on and what's going on. And they worry (HV:i).

Tina places herself alongside the mother on the roller coaster, powerless to control the ride.

Changes in Breastfeeding

Renfrew et al. (2000) state breastfeeding should be pain-free and effective. Adequate growth of the baby is one aspect of effective breastfeeding; in order to achieve this, a baby needs to have free access to the breast, and to be able to 'milk' it efficiently, which can depend on how he is held to the breast. If these conditions are met, very few women are physiologically unable to meet their baby's requirements for adequate nourishment. Working backwards, if a baby is experiencing faltering growth of concern¹⁵¹ it may be fruitful to alter either the frequency of feeding or to improve the baby's effectiveness in removing milk from the breast (or both).

Women in this study rarely mentioned changing the way they breastfed in order to improve weight¹⁵². Zoë increased the frequency of feeds when her sleepy baby lost 12 ounces in the first two weeks. Suze mentioned her mother telling her that "you need to make sure he has a proper feed and then he won't wake up so often" (BG:f). She went on to describe her frustration over her son's poor weight gain, so, if she had been taking up this suggestion, it did not appear to be helping. Alex turned this issue the other way around: when early weights showed that her daughter was gaining, she felt able to decide not to respond to every cry by feeding, saying; "I tried to get her to go longer once I saw that she was gaining weight" (2:1). The centile curves of the UK90 chart show a shallower rise in early weight gain than breastfed baby data charts and may underestimate normal breastfed baby weight gain in the early weeks. Limiting a baby's access to the breast on the basis that weight is tracking UK90 centiles could have the potential to jeopardise further adequate growth. At both interviews (the second after she had changed to bottlefeeding) Alex mentioned that it would be concerning if her daughter grew too rapidly.

Bethany told me:

It does make you think, 'oooh, what have I done differently this week, why has she only put an ounce on?', I don't suppose there's any real reason for it...I think it makes you a bit more...you spend just that extra time to make sure she's had enough, you know,

¹⁵¹ Remembering the intricacies of growth patterns and the variation in the shape of the growth curve in breastfed babies.

¹⁵² Or for any other reason.

instead of thinking right, she's gone to sleep, I think I've been a bit cautious and I just think right I'll just leave her a minute and see ...if she takes a bit more... (1:i).

Leaving the baby longer at the end of a feed may have meant the baby received more hindmilk and had a physical effect. Bethany had not discussed this with a health visitor, so she might have decided to do something less effective (such as increasing the interval between feeds¹⁵³). Hannah indicated how she responded: "I'm still paranoid, me....I still get up in the middle of the night to feed her... she is gaining"(1:f).

Positioning and Attachment

"Breastfeeding is not a by-the-book procedure" (Mohrbacher & Stock, 2003, p4): it is likely to be more successful if the basic skills are learnt – a mother-baby pair will then develop their own breastfeeding style (Renfrew et al., 2004). Women in this study did not appear to be aware of this: mothers talked about getting the baby to latch on, but none indicated that they had been given detailed help in achieving this or understanding the principles. At one breastfeeding group, Pam arrived with her six-week old baby, saying "I wonder if you can help with a case of nipple feeding?" Liz took her into another room, and told me the following week:

I spent an hour with her. I was amazed at some very basic things she did not know¹⁵⁴. The baby took the breast beautifully, but I helped her with holding him. We don't do a lot of that, I had to ask her to give him to me and then hold him myself to refresh my memory (HV:f).

In a breastfeeding group meeting, which Tina was covering during holiday time, she asked a mother: "Is the fixing ok? Sore nipples are predominantly due to fixing" (BG:f). Asking a woman if the baby is fixing ok, when she may never have closely observed anyone breastfeeding and has never had a session of skilled teaching or written information about positioning and attachment, is unlikely to be useful. If the mother had the knowledge to assess this, she would have done so. Hunter (2003) reported that women who had received help "were amazed at how much difference a small alteration in position could make" (p24), indicating a general lack of recognition of how vital a cornerstone this is for the physical efficacy of breastfeeding (Renfrew et al., 2000; Wilson-Clay & Hoover, 2002; Mohrbacher & Stock, 2003).

During observations and interviews, I noted many instances of positioning which *might have been* problematic. I was not able to focus on attachment¹⁵⁵ as this would require close observation

¹⁵³ Zoë received this suggestion. This suggestion appears to be based on the idea that longer interfeed intervals will allow more time for the breast to fill. Mitulas et al. (2002) show that a short interfeed interval increases fat content.

¹⁵⁴ My impression from subsequent contact at the breastfeeding group was that Pam had a similar level of knowledge as other mothers in the local area.

¹⁵⁵ Positioning refers to the way the mother is sitting and the way she is holding her baby during feeding. Attachment refers to the way the baby takes the breast into his or her mouth. Changing position may facilitate effective attachment, which will enable the baby to feed more effectively (Renfrew et al., 2000).

incompatible with my research role¹⁵⁶. However an uncomplicated assessment of even gross positioning is difficult, as a 'good position' is often not needed in order to achieve pain-free and effective feeding (Renfrew, 1989). However, when coupled with sore nipples, frequent feeds or poor weight gains, it is possible that many women encountered could have improved their breastfeeding effectiveness through fine-tuning positioning. In fieldnotes I noted what I saw:

Ulrike puts the baby to the breast [BABY TIPPED ONTO BACK AND BOTTOM ARM BETWEEN ULRIKE AND BABY] (1:f, my original emphasis).

Suze and Rachel feeding, babies dangling into laps (BG:f).

Other changes in feeding mentioned involved attention to the diet and rest patterns of the mother. Mandy said:

If babies aren't gaining a lot of weight, and mums are anxious about it, but other than that they're settled, personally I find if you give them advice about resting and eating themselves and fluids... (HV:i).

When the tape recorder was switched off, Mandy told me a bit about her own brief breastfeeding experiences, attributing her inability to continue to a lack of self-care. Her approach with mothers was to offer what she felt she had needed.

Kelly experienced the effects of low calorie intake, telling me:

I cut extra cakes and biscuits out and my milk nearly went. It was like when he came on to me, there was nothing there ... I just started having little things like full fat cheese and an extra snack... and it made the difference (Kelly, 2:1).

Renfrew et al. (2000) note that "there is no evidence that dietary modification or manipulating fluid intake is of therapeutic benefit" (p66).

Worrying

Some women appeared to discuss worrying almost as an activity or intervention they undertook when the weight was of concern. This was related to a sense that weight deviations were threatening to the baby. In fact, poor weight gain¹⁵⁷ is a sign of possible difficulty which invites investigation, not in itself a disorder (Lawrence & Lawrence, 1999). Interventions should seek to target the causes of any growth faltering. This basic point is one which was not mentioned clearly in the clinic or by any mother in the study. Liz alluded to it:

¹⁵⁶ Also, as those in the study did not realise there is a body of expertise on the physical skills of breastfeeding, they did not generally identify that I might have any competence in this area.

¹⁵⁷ All incidents observed were of babies who had lower than hoped for weight gain. It is likely that some women may have similar concerns about high weight gains.

One of the reasons we are weighing and looking at weights, is that occasionally you get a baby with a medical condition (HV:i).

Suze, whose son's weight was on the ninth centile said:

His length and head are nicely following the graph... but it [weight] is a worry. His bones are growing, I worry that he will have weakened bones (BG:f).

The health visitor replied: "He will find his natural pattern. Don't worry as long as there is no nose dive"(BG:f). A fuller explanation might have been helpful, as Suze returned to this worry several times during the session.

Wanda's baby was causing concern; he was vomiting, and Wanda was shortening feeds in response. As he was weighed, she said: "He's lost – I thought he might have lost with being poorly" (BG:f). The following week she reported that he had continued to be unwell; one night he had difficulty breathing and hospital admission was considered. But, "We turned the corner on Saturday and he is now feeding all the time". She weighed him – I sat by scale and helped by zeroing it. Wanda said; "He has gained four ounces...he's recovered what he lost. You good boy, you good boy" (BG:f).

Weight loss may be a symptom of illness. While it may be useful to monitor the loss and regain of weight after the illness, the weight loss here appeared almost to be seen as a further threat to health, with the weight regain greeted with relief and praise for the baby.

Bethany described herself as 'laid back' but several times responded to slight fluctuations in weight with concern:

She's not put on any weight this week. The week before she put on 10 oz – I thought she'd do the same again...One week and if there is no gain, I'll worry... what's different this week from last week? Why hasn't she put any weight on? (1:i).

Bethany here planned in advance to worry! Ulrike suggested the source of worry is very personal, saying; "If she doesn't gain weight you think: is there something wrong with her or is there something wrong with me?"(1:i).

Women did mention worries to me during interviews in phase two, but in observations and interviews in the clinic in phase one these were more striking, with women forcibly expressing their concerns. After the event these are probably felt less acutely. This may explain a dissonance between the five to six percent of women mentioning baby's weight as a cause of concern in surveys (Hamlyn et al., 2002), and anecdotal concern that weight is a major issue in the continuation of breastfeeding for women in the UK. Little ethnographic observation has been undertaken in order to identify the lived course of breastfeeding; such observational studies or ones with regular, frequent interviews could reveal more of how day-to-day concerns shape feeding practice.

Trading Off

Weight was not the only measure that women used for how things were going with their baby and breastfeeding. As discussed in chapter 7, babies' feeding frequency, sleeping patterns and how settled they were, were important, and these were evaluated in conjunction with weight gain.

The fact that's she's waking up twice a night makes me feel like she's not having enough... but, you know [the weight] is fine, so we're just going to carry on (Ulrike, 1:i).

This suggested that adequate weight gain could give the baby a bit of leeway. This could work in the other direction. Alex explained that "I tried to get her to go longer once I saw that she was gaining weight"(2:1). Weight gain figures were thus used in a sort of equation in which they were one variable along with behaviour. Mothers attempted to balance the figures to attain the 'answer' for their baby.

Jean described to Mandy what she had told a breastfeeding mother whose baby would not breastfeed regularly at one time of day:

I said to her, the baby feeds for five minutes, is gaining weight beautifully, is settled and sleeping – what more can this baby do for you?' (HV:f).

The mother appeared to find her baby's unhappiness distressing, but the evidence of the numbers – weight gain, number of feeds, length of sleep – compellingly showed that everything was all right.

Conclusion

I have provided a close exploration of women's accounts of the changes they made in feeding their babies when weight did not follow the expected line. During the study itself, I was conscious of disappointment that I was collecting very few startling instances of the use of formula. Partly this arose from having come across these in my volunteer work, and hoping to document them, partly from a desire all researchers may feel that the study results are as colourful and dramatic as possible. However, through my analysis, a picture is revealed in which breastfeeding largely had to perform against numerical standards of the chart and routines. Formula was often used and regarded largely as a benign progression from breastfeeding. This highly processed foodstuff was understood as a reliable supplement which would supply calories to a baby and ensure weight gain. This contrasted with breastfeeding, which did not always supply the weight gain and settled behaviour expected of babies. Only a superficial understanding of principles of breastfeeding management was evident, with little use of alteration of physical breastfeeding to influence effectiveness.

In addition to giving supplements of formula and solid foods to keep babies following the line, women engaged in worrying as an active response to demonstrate their attention to the possible threat

to the baby. Since the deviations reported in these cases were actually minor and well within normal fluctuation, this worry was almost ritual in character, demonstrating concern and proper attentiveness to possible risks to the baby's health (Murphy, 1999). Other responses, such as changing the frequency of weighing also appeared to be more 'aversion ritual' than scientifically-based methods of improving weight gain. In chapter 10 I turn to a consideration of the ritual character of the weighing interaction, as described in chapter 5, and analyse the sought-for outcome when babies are placed in the pan of the scale.

Chapter 10: WEIGHING AS A RITUAL OF REASSURANCE

“Weighing the infant was a key activity in the infant welfare movement [...]. An orderly increase in weight, experts believed, was evidence of good growth and overall health. It was also important as a ritual – faced with so many infant deaths and no medicines to help, public health workers weighed infants to demonstrate that the community was working to lower the infant mortality rate” (Brosco, 2001, p1138).

“Across cultures and throughout history, humankind has used rites of passage to transmit cultural beliefs and values to the individuals participating in those rites” (Davis-Floyd, 1992, p1).

Watching weighing encounters, I saw repetitive, patterned interactions involving health visitors and mothers. In this chapter I examine this behaviour, using anthropological theory of social rites of passage to uncover the meaning weighing episodes have for those who take part and for the wider family and health services. I suggest that the expected outcome, each time a baby is weighed, is reassurance. Weight which can be recorded in a dot on the chart which is in an acceptable place is taken as providing evidence that a baby is doing well enough under his mother’s care, and if she is breastfeeding, on her milk. This quantifiable measure occupies pre-eminence in the understanding of the baby’s well-being. By relying on frequent recording of this signal that the baby is thriving, mothers, and health visitors, are tied into a process of serial reassurance. I aim to show that this repetitive ritual helps embed our social understanding of breastfeeding into the consciousness of women and to understand their bodies as productive units subject to the quality control of health visitors and scales.

Rituals, Nursing Care and Anthropological Theory

In chapter 5 I described how the weighing episodes I observed in the clinic appeared as ritual occasions. I listed the steps in the ritual, and noted which actions were performed by mothers and which by health visitors. The health visitor role was likened to that of a priestess, by implication the mother taking the supplicant role: in line with the hierarchical relationship described in chapter 7. In seeking to analyse this behaviour, I turned to literature on rituals. Ritual behaviour in nursing practice¹⁵⁸ has been described disapprovingly, but some writers have delved deeper, using anthropological concepts: I also turned to these.

Ritual has been “stigmatised and associated with thoughtless repetition” (Strange, 2001, p177) and blamed for holding nurses back from best care practices (Tonuma & Winbolt, 2000). Draper (2003) notes that this categorisation as “A Bad Thing” allows analysis to “avoid complexity” (p56). Ritual

¹⁵⁸ I did not find any specific literature on ritual in health visiting: as health visitors are all trained nurses, and may have practiced in any branch of nursing before their health visitor training, I felt this literature could hold valid insights.

has been identified as having important purposes of emotion management and meaning during the stressful work of nursing (Wall, 1996; Strange, 2001; Philpin, 2002) and of providing patients with assurance of effective care (Biley & Wright, 1997). Routine procedure and meaningful rite can co-exist within a single activity; and something which has a useful technical effect can also provide ritual outcomes (Douglas, 1984; Davis-Floyd, 1992; Wall, 1996). Strange (2001) and Philpin (2002) note that nursing rituals aid nurses to perform care for the dying and deal with the dead; Wall (1996) describes its role in surgery; Davis-Floyd (1992) discusses it in modern, western birthing practices. Surgery, death and birth are all significant life events. In our society, some turn to religion for support during these events, but turning to medical care is more universal.

Rituals used at such life-changing times are the subject of ethnographic description, and van Gennep (1960¹⁵⁹) described these life transitions as moving an individual from one state to another (unborn to born, live to dead, child to adult), and asserted that ritual provides social recognition of and symbolic control over these. The sum of rituals which move individuals from one state to another constitutes a 'rite of passage' (van Gennep, 1960). This is sub-divided into three phases: separation, transition and incorporation. Turner (1969) called these: pre-liminal, liminal and post-liminal. Douglas (1984) noted:

"Danger lies in transitional states, simply because transition is neither one state nor the next, it is undefinable. The person who must pass from one to another is himself (sic) in danger and emanates danger to others. The danger is controlled by ritual which precisely separates him from his old status, segregates him for a time and then publicly declares his entry to his new status" (p96).

The term ritual may conjure up colourful practices of other cultures, perhaps especially more primitive ones, or may imply our religious observances. Even in the west, however, we perform stylised, traditional, secular actions when our family members marry¹⁶⁰, are born or die: our social rituals are as freighted with meaning and the characteristic of our values as are those of other cultures (Miner, 1956¹⁶¹; Douglas, 1984).

Davis-Floyd (1992) identifies four functions of ritual during a rite of passage. These are:

- to give a sense of society's control over natural processes;
- to limit the dangers perceived to be present in transitional times;
- to give repetitive messages to the person undergoing transition concerning the core values of that society: for Davis-Floyd (1992) these are conveyed "through the emotions and the body" (p17);
- to renew for all involved in the ritual itself, and wider society, the belief system of the society (p17).

¹⁵⁹ This date relates to the first English translation; van Gennep's work was first published in 1904.

¹⁶⁰ Indeed, modern marriage rituals appear to be thriving and becoming ever more elaborate.

¹⁶¹ In junior high school (circa 1970) I was given Miner (1956) to read by a teacher from Africa: the device of the paper, which treats the hygiene habits of contemporary Americans as exotic, strange and saturated in superstition, made an indelible impression on me.

The liminal period is negotiated by crossing over “the bridge of rituals”, changing from one social role to another (Davis-Floyd, 1987, p288).

Childbirth and After

Childbirth is a key life-transition (van Gennep, 1960). Davis-Floyd (1992, 1994) argues that birth rituals in modern America transmit and enforce values of the national veneration of technology to women at their time of transition to motherhood (see also Lomas, 1966). Birthing in the UK has been similarly characterised as a rite of passage (Machin & Scammell 1997). These authors emphasise rituals performed during the hospital stay, with less focus on the early months after birth (Davis-Floyd, 1992, 1994; Machin & Scammell, 1997). Transition to motherhood for the woman; and personhood, or membership of the community for the baby, is not complete by hospital discharge. Extending the analysis to examine the re-incorporation of the new mother and her baby into the community may illuminate practices of postnatal care. Traditional customs such as ‘lying in’, in which a period of six weeks’ rest was enforced through a series of rituals, have passed away, leaving only vestigial traces in the six-weeks’ examination of mother and baby and the limit for the registration of the infant’s birth (Wilson, 1990). Modern western cultures are weak on ritual to cement the incorporation phase (Seel, 1986; Davis-Floyd, 1992). Indeed, this is expected to happen within the first few weeks. I will return to women’s experience of the transitional and incorporative phases in chapter 11.

Weighing Ritual

Well-baby clinics and health visitors provide state support to new UK mothers and surveillance of new babies. If babies are in a transitional phase, after their birth, evidence from my observations provides clues that two important stages in their conceptual journey to personhood are moving from exclusive milk feeding to a ‘weaning diet’ and sleeping through the night. I discussed the focus on achieving a more-nearly adult pattern of a long night-time sleep in a separate room as early as possible in chapter 8, with evidence in chapter 9 that interventions in feeding were used to achieve this. The underlying expectation that a child is not fully human until he is sleeping through may account partially for the attention and anxiety focussed on this issue. Introducing solids may be undertaken in order to promote ‘better’ sleeping (Ewing & Green, 1999; 2000; Anderson et al., 2001).

Both mothers and health visitors were alert for signs that the baby was ‘ready for solids’, and there was discussion about behaviours such as dribbling and chewing fists long before the baby was 16 weeks old¹⁶². Moving to non-milk food is one of the key transitions which health visitors preside over. The baby is in transition from fetus to a person. Davies and O’Hare (2004) note that

¹⁶² At the time of the study, the DH (1994) recommendation was that babies be exclusively milk-fed until four - six months.

historically this transition from “suckling” to “true child” (p84-5) who eats regular human food has been important (see also Dick, 1987). Sarah mentioned how this might feel to a breastfeeding mother; “when I started weaning, and whether that’s because you’re feeding them in two ways, you’re not so vulnerable about [weight]” (2:2).

Persistence of the sense of this transition may explain the ubiquity of the bottle as a symbol of babyhood¹⁶³. It may also help account for the impetus to introducing ‘solids’ much earlier than recommended. Mothers report they are responding to baby signals (Walker, 1995; Ewing & Green, 1999, 2000; Anderson et al., 2001; Wright et al., 2004), but may be eager to find signs that their babies are ready to become real people.

The period between birth and weaning-and-sleeping-through thus appears as a long transitional or liminal phase. This time also roughly coincides with what for many women is an in-between phase. On maternity leave from paid work, job identity is muted. Many women plan to return to work (even if not reincorporated into quite the same job or for quite the same number of hours), so being with the baby is ‘in-between’, with total responsibility and nearly 24-hour contact adding to the ‘unusual’ state of the mother. Transition back to work will usually involve devolving some care to others, transition to solid food will involve integration of the baby with ‘normal eating’ (at least conceptually¹⁶⁴), while transition to adult sleep patterns for the baby gives the mother back her adult pattern too. I explore the early months as a time of liminality for the mother further in chapter 11: in this chapter, I examine the rite of weighing itself.

Mapping the weighing interaction against the four criteria listed by Davis-Floyd (1992) helps demonstrate its ritual significances. The first function, of ‘packaging’ natural processes as controlled by society, is achieved through the use of two man-made implements: scales and charts. Scales have been in use for thousands of years and, in the western tradition, are a symbol of ‘blind justice’; blind to the social standing of those petitioning, and therefore even-handed (Graham, 1981). They are expected to give a ‘true’ record, to provide an absolute account of the infant’s well-being. As noted in chapter 2, many conditions must be met in order for weight measurements to be accurate. These functional conditions were only occasionally alluded to by any participant in this study. Generally there was a simple acceptance of the impartial truth of the reading on the scale. Growth charts as constructed tools are shaped by the decisions made about what data to include and how data were collected (hence the debates over charts discussed in chapter 2). However, these were simply treated as ‘true documents’. Many babies’ plotted curves will show rough conformity with the centiles, thus

¹⁶³ For example, baby changing facilities at motorway service stations and airports are usually denoted by a bottle icon. These also often provide a private space for feeding – usually of interest to breastfeeding women, while women who are bottlefeeding are likely to feel comfortable taking their baby to the café area to feed. Thus the bottle symbol actually means ‘you can breastfeed here’, a rather Orwellian usage.

¹⁶⁴ The proliferation of turkey twizzlers and other toddler-enticing food means the actuality may be somewhat different.

growth appears to 'follow' the predictive instrument. Use of the chart to forecast weight into the future (as in grocer's weighing, described in chapter 6) indicates this. Douglas (1984) notes that experience is framed by ritual: a UK mother will 'know' when to move her child up a nappy size or if she or he is safe in a carrier because the chart gives the weight, rather than relying on other ways of measuring the fit of the baby to garment or sling.

The fact that women weigh their babies frequently in the first six months, and less often thereafter, suggests weighing's function of helping traverse the liminal period. The implied danger that an infant, reliant on a single source of food, will not thrive, is compounded when that source comes from the mother's body. Mothers who feel the heavy burden of accountability for their infants' well-being, signal their compliance with the norms of society by bringing their infants for weighing, indicating that they will act to protect the infant if the weight shows he or she is in danger. The socially understood concern that breast milk may not be enough is implicitly present in the need to judge the baby's progress through this assessment of the 'intake'.

The repetitive nature of weighing fits the third aspect of emphasising core social messages. One of these may be quite simple: that the main objective is a growing baby (Seel, 1986). The happiness of the mother¹⁶⁵ and the quality of the mother-baby relationship are not placed at the centre of interactions.

Weekly or fortnightly weighing fixes the importance of evaluating infant health and breastfeeding success through numbers and in relation to how the weight is following the centile line of the chart, with little attempt by health professionals, sharing these cultural values, to limit weighing episodes. The baby, although bodily involved, is unlikely be able to take such messages on board. For the mother, the open nature of the clinic signals the right of society to judge and scrutinise her care of the baby and the adequacy of her milk. The measure of success is weight gain which conforms to expectations, not the quality of the breastfeeding relationship or the emotional relationship between baby and mother, or wider family. In a society in which commerce and trade are mainstays of an economy which is expected to be continually growing, scales are an important icon. Gordon Brown, currently Chancellor of the Exchequer, expressing joy at the birth of his son, implicitly compared his job with infant growth monitoring saying "The only growth figures that I'll be thinking about are the rising weight...of the baby" (Moreton, 2003).

The last feature of ritual suggested by Davis-Floyd (1992), is the renewal for all of shared social values, and is illustrated in the way health visitors, families and friends focus on this measure of infant well-being. The fact that severe deviation from expected weight gain would result in referral to

¹⁶⁵ In clinic I observed only one mother receive a questionnaire designed to assess her risk of postnatal depression. She was left to complete this in a corner of the room, and it did not generate much discussion between her and the health visitor.

medical care or to social services, and could lead, as in Zoë's case, to hospitalisation, was not often voiced by mothers. However, these represent the enforcement by the whole community of adequate care. While medical intervention might have technical effect in increasing the baby's weight, as noted in chapter 2, it is unclear how often interventions currently suggested result in better infant health outcomes. The emotional importance, however, of enacting this social concern, is suggested in the quote from Brosco (2001) on page 165.

Reassurance from Clinic Weighing

In chapter 5, I described the moment of uncertainty at the centre of a weighing interaction, with the number given by the scale and noted on the centile chart determining the emotional outcome. I suggest that weighing babies is heavy with meaning¹⁶⁶. In chapter 6 I outlined a typology of reasons women give for coming to have their baby weighed. However, whether mothers were principally coming to include that week in their record, or were genuinely concerned that the baby was unwell, as they stepped up to the scale, they were opening themselves to a judgement of their care. For breastfeeding women, this included a judgment of the adequacy of their milk production: "Even when the child is growing normally, the process of measurement simultaneously implies the possibilities of abnormality" (Olin Lauritzen & Sachs, 2001, p 504). Western societies have increasingly come to rely on numbered indices and visual depictions to 'know' about individuals' health. Duden (1998) discusses how technology has shifted the experience of pregnancy toward a focus on the visualisation of the fetus, placing the seeing of the ultrasound scan as the moment of making pregnancy feel real, rather than the lived experience of quickening. Sachs (1996) found that learning their cholesterol level had a huge impact on Swedish men in a preventative health program: not just diets but social habits and mental outlook were affected, and the impact was felt whatever the reading.

Reassurance was mentioned by both women and health visitors, and appeared to be the desired outcome of weighing a baby.

I quite like to come in every week though, because you know, it's quite like, I don't know, it's reassuring when you weigh 'em... It's the ones during the day when you think, oh is she getting enough? And, 'cos you can't tell, but that's why I like coming...I think its just reassuring... And I'm just curious, me. It's like having her measured and everything, I just like to know what she's up to (Bethany, 1:i)

You can see that it's [the weight] on the line that it's supposed to be, you're reassured that everything's ok (Wendy, 2:1).

It was nice to see the reading, it just like reassures you (Rachel, 2:1).

It is interesting to note the emphasis on the *visibility* of the weight measurement. In chapter 8, I noted the impact of weights plotted in relation to chart centiles; I also noted that, while growing along

¹⁶⁶ Pun intended.

centiles in the bottom quarter of the chart was concerning, weight gain nearer the top of the chart was seen positively. The plotted weight measurement might not be so important when the baby could be seen to be growing:

I wondered... If David was smaller I might want the reassurance [of weighing] (Olivia, 2:2).

I think [weight] would be [more important] if you couldn't see it so much. Because he's changed so much, you can actually see... as his clothes change, as his nappies change, get tight (Una, 2:3).

You can tell he's a growing lad... but [its] also reassuring that he's keeping on the same line on the chart (Nadine, 2:3).

In such accounts, the visibility of the baby's size is an alternative reassurance. However, both Una and Nadine describe this alongside the plotted weight rather than as a complete alternative, while Olivia appeared to feel that the absolute size of her baby, rather than ways other than weight which indicate that the baby is growing, was the important factor, which will obviously only apply to some babies. Sarah, who weighed weekly said: "She is a small weight anyway, there's not much room for leeway" (2:2), thus appearing to confirm her need to keep an eye on the charted line.

Health visitors also appeared to feel reliant on receiving reassurance from regular weighing.

With breastfeeding...I have a lot of clients who say to me 'I like to weigh the baby regularly because I can't really see... how much milk the baby's getting, so that gives me an idea'. And then speaking from a professional point of view, I think that can be helpful...So that [regular attendance and weighing] ties in to the fact that it's a way of everyone getting reassured that the baby's thriving (Liz; HV:i).

This comment here highlights the uncertainty both mothers and health visitors feel about using other ways of assessing infant well-being or the effectiveness of breastfeeding.

Several times I heard health visitors suggest that reassurance is the goal of clinic encounters:

Ulrike comes in with baby, who is waking a lot at night, but weight ok, her health visitor has suggested supplement, Liz (HV) says she doesn't have to give this, and asks: "Have you just come to clinic for reassurance?" Baby weighed (1:f).

Vicki starts talking about the feeding times. Feeds were previously every four hours and now every two-and-a-half hours ... the baby is weighed and the weight read out. Liz (HV): "You've had the reassurance there...does that make you feel a bit more confident?" (BG:f).

This equation of weight gain with reassurance could leave health visitors with explaining to do if gains were smaller:

I mean there's pros and cons when you're breastfeeding, weighing every week. A lot of people find it quite reassuring because you can't see how much milk they're taking, but other hand, weight gain isn't so sort of consistent and there will be a really big gain and then a smaller gain (Liz; BG:taped session).

I always try and explain to mums, uh, to give a reason for the weight gain or the weight loss or not big gain or whatever. Or I just dismiss it: saying every week's different, 'that's fine' (mimics happy voice), but ... maybe we're wrong, maybe it's us that say mums are bothered. And we're trying to appease mums and they're not bothered anyway, I don't know (Mandy; HV:f).

What is Reassurance?

In a number of studies reassurance is given as the outcome women expect when attending clinic for weighing (Sefi & MacFarlane, 1985; Dyball, 1992; Sharpe & Loewenthal, 1992; Nomandale, 2000; Hall & Elliman, 2003). An audit of phone calls received by an Australian volunteer breastfeeding support organisation lists "reassurance" as one of the aspects of breastfeeding for which mothers might be seeking help (Grieve & Howarth, 2000, p14). At every age, more than 50% of mothers phoning were recorded as seeking reassurance. Similarly, an evaluation of a US breastfeeding drop-in centre showed that at least two-thirds of women surveyed gave a desire for reassurance as the reason for attending (Pastore & Nelson, 1997). Graffy (1992) noted advice given to women who felt they did not have enough breast milk and found that 19% "received reassurance or support" (p63). Such studies appear to suggest that reassurance is an easily-defined commodity which can be handed to women. An advertisement¹⁶⁷ for a scale suggests its use "to provide reassurance that allows breastfeeding efforts to continue – and succeed" (Medela, 1998-9¹⁶⁸) as if by purchasing the scale, the professional can purchase reassurance, and then provide it to mothers through her use of the scale.

Reassurance has also been perceived less positively. Kirkham (1989), in an ethnographic study of birthing practices, notes that "when they felt unable to give information, midwives often gave reassurance" (p127). Reassurance was simply "seen as a good thing and is not analysed further" (p129); the result was to stop the woman seeking further information, while, at the same time, allowing midwives to feel better. Hoddinott and Pill (2000) found that women felt that "Encouragement, confidence building and reassurance of the baby's enjoyment and well-being were particularly important", however, this had to be more than "words alone" (p229). Hunter (2003) found that the need for reassurance was the greatest support need in the first weeks; this involved telling parents "that problems were not their fault and what they were experiencing was normal"

¹⁶⁷ This appeared in the *Journal of Human Lactation*, which aims to cover international issues but is dominated by the concerns of North American Lactation Consultants.

¹⁶⁸ This advertisement appears in all four of the issues of this journal in 1999. It is also in the two copies of the journal I have from 1998 – this is when I began a personal subscription. All of these advertisements appear on unnumbered pages at the back of the journal. It is not available by searching electronically. This is an illustration of the positioning of advertising material – peripheral to the academic discourse within journals, but physically present all the same.

(p23). This was echoed by the personal account of Hanss (2004). It seems that the visual depiction of growth on the chart may be more compelling than words alone, however if the expectation is that the baby should follow a centile exactly, it may be that a powerful, *inaccurate* message is being transmitted.

Tessa, who knew that weight charts could be inappropriately based on formula-fed infants, and who rejected routine weighing as a yardstick for her experience, spoke about one of the weights she had had done: "I did feel reassured by the good news and I knew it would be good.... Yes, I can't escape that" (2:1). Tessa illustrates the power that participating in the ritual exerted, despite her reasoned decision to avoid it.

This suggests that reassurance needs to be carefully defined. The concepts of support and confidence-building also need to be carefully defined. Different aspects or types of support have been identified as important for women. Dykes (et al., 2003, 2005b) separates out instrumental or practical support, informational support, network support, emotional support and esteem support. Receiving a weight which conforms to expectations may support esteem even if it is also giving poor informational support. Some encounters may lead to practical help with difficulties, but may or may not supply effective emotional support; research to try and establish more carefully what the 'reassurance' that is reassuring actually consists of is indicated.

Some authors explore confidence-building, using self-efficacy theory (Dennis, 1999; Blythe et al., 2002). Dykes (2004) warns that this "has tended to be applied in a positivistic way" (p115) and the aim has been to identify which women will continue breastfeeding longest, or to modify behaviours to achieve this. Reassurance has not been separately identified and examined to see whether it is a useful part of this process of confidence-building. It may be that different ways of offering reassurance have different results. While the hoped for aim may be to build self-confidence, the reassurance I saw proffered in the clinic appeared to lock women into dependence on further weighing in a process of 'serial reassurance'.

The concept of confidence was rarely mentioned by women in this study. Olivia, who weighed her baby only a few times, replied to my question about what she might tell a new breastfeeding mother about weighing;

It's difficult because I am confident, but I just needed to look at him to know that he was getting milk. With breastfeeding it is a worry. With bottlefeeding you can see how much they are taking.... It is reassuring to see the health visitor, but I would say that maybe they should not have automatic weighing. Maybe the scales should just come out if they are needed or if someone asks for weighing... it would save them time, too. I think if you breastfeed, you build confidence and trust in your body and in your baby (2:3).

She suggests that relying on weighing could impede confidence-building, while indicating more embodied ways of building confidence. Tessa, another mother who seldom weighed her baby told me that she did not plan to attend the breastfeeding support group because: “I probably won’t meet anyone like me... with the confidence in breastfeeding” (2:1). She thus indicated that her confidence was built away from the system of clinics and weighing and even the breastfeeding group.

Serial Reassurance

In looking for reassurance, some women appeared to be expecting a guarantee that their baby and their mothering was all right. Jayne told me; “At the beginning you’re not sure whether you’re doing things right and you want to make sure. And that really is all you can use at that point. Weight” (2:1). She seems to seek beyond reassurance to surety. However, other women seemed to acknowledge the fact that complete assurance or surety could not be expected, and further assurances would have to be sought.

In my reflective diary I kept a memo as I puzzled over the concept of reassurance.

Re- assurance: implies prior doubt, and prior assurance, in a cyclical reiterative process. Is it different from **building confidence**? The latter sounds like a process which moves towards a goal. Reassurance hooks women and health visitors into checking the weight, feeling assured, but needing to check again – and again – because the moment of assurance is passed. It implies an external source of assurance, not inner (such as inner confidence?) Does this relate to the external depiction of the baby’s health on the centile chart?

Women come for reassurance, and health visitors want to offer them reassurance, and health visitors themselves need reassurance about breastfeeding and the baby.

We seem to be talking about a cyclical process of serial reassurance (reflective diary).

The use of weighing and plotting on a chart as the yardstick to measure the baby values external, scientific ways of ‘knowing’ about the baby. Ironically, where women supplement breastfeeding in order to keep the weight up, a different body of scientific research would suggest that the baby’s well-being has been compromised.

Reassurance in Other Contexts

Reassurance has been examined in other health contexts and I turned to this literature to explore further. A study of women at risk of familial breast cancer found they were reassured by having a genetic assessment of their individual risk. “By becoming members of the surveillance society they were able to relegate their concerns...to a lower zone of relevance” between yearly visits (Parsons et al., 2000, p271). Responsibility for evaluating and assessing what is going on could be reduced to a number. McDonald et al. (1996) examined encounters after an echocardiography test (for heart

conditions), to which patients had been referred by their GP, and found that many were not necessarily reassured despite 'normal' findings. Personal factors in the patient's past or personality and the quality of the doctor's communication were found to be important in whether patients felt reassurance. Patients in the first study were already in an at-risk group, and in the second had exhibited symptoms which prompted referral, so a comparison with women in a well baby clinic is not exact: however both findings offer interesting parallels.

In a moving account, Steensma (2004) records a case of a young woman with terminal cancer, noting that reassurance is not always appropriate, and may even give a false message:

[T]he concluding words of the referring physician seem out of place, even flippant: *I reassured the patient*. 'Reassured her?' I moan [...] 'Whatever could he have reassured her about?' Her situation is terrifying (p3196, emphasis in original).

Conclusion

I have suggested that weighing can be understood as a ritual encounter which offers mothers the opportunity to show that they are concerned about their baby, and that they accept responsibility for their baby's well-being and that they are accountable to the wider family and society. Health visitors can also demonstrate their caring for women and babies by offering regular (or irregular if women desire this) assurance about the baby's well-being based on the performance of plotted weight. Since not every weight will fall on the centile expected, and so may not reassure the mother, the reassurance sought through the weighing may not be forthcoming, locking both parties in a cycle of further weighing and serial reassurance seeking. This chimes with the findings in chapter 9 that health visitors and mothers intensified weighing frequency in cases where weights were not following the centile line.

The concept of reassurance could be a fruitful ground for further exploration. The use of other ways of assessing breastfeeding effectiveness, along with good information about what range of plotted growth is normal might give women better informational support to interpret the weights they receive. Further, prompt, accurate identification of possible problems for which unusual growth is a symptom, along with the assurance that there is no need for another weight measurement before the next date indicated might help to lessen the intense reliance on weighing and weighing alone.

In my observations, the frequency of weighing exceeded recommended levels, while issues of switching between scales, taking weights at one time of day and so on were not adhered to. So, at the same time as proposing that weighing fulfils an important ritual function for women and babies in their transition through the months of milk feeding, I argue that if decisions are to be based on the

outcomes of weighing, better attention should be paid to its routine aspects: including the timing, relation to a feed, maintenance of scales, accuracy of recording, appropriate frequency.

The importance of the weighing ritual appears to lie in its ability to help smooth the way through the liminal, postnatal period. Babies are in a special, transitional state, in which they behave differently from other children or adults, and appear uniquely vulnerable. Paying attention to babies' weights during the time of milk-only feeding signals careful attention to their needs on the part of their mothers. For breastfeeding women it also signals participation in external evaluation of their ability to sustain their infants through their milk.

In the following chapter, I explore how the time after giving birth is liminal for women, and doubly so for breastfeeding women. I use a range of findings from others' qualitative research to substantiate this and then suggest how findings from this study help to link these findings, deepening our understanding of our cultural experience of breastfeeding.

Chapter 11: BREASTFEEDING – NEGOTIATING THE LIMINAL STATE

“When we use the language of ‘breastfeeding’, we are conjuring up the image of the milk: we see the women feeding milk from her breast to her baby. The milk is the essential element. When we use the word ‘suckling’ or the phrase ‘at the breast’, we are not talking about the milk, but the activity that the mother and baby are engaged in, the interaction, the *relationship*” (Rothman & Simonds, 2003, p223, emphasis in original).

Many women “expressed a desire to proceed along a perceived ‘postnatal trajectory’ and get back to a perceived ‘normal’ existence” (Mahon-Daly & Andrews, 2002, p71).

Women’s understanding of breastfeeding as a breast milk delivery method, subject to quality and quantity checking through baby weighing and charting, is part of their wider cultural experience of motherhood. I now turn to other aspects of breastfeeding which women in my study discussed, to illuminate the context in which weighing is such an important source of reassurance or anxiety. I draw on qualitative literature about the experience of breastfeeding in western societies to show how the findings of others resonate with mine. Spradley (1979) states that:

“[R]esearch proceeds on two levels at the same time. [...] the ethnographer both examines small details of culture and at the same time seeks to chart the broader features of the cultural landscape” (p185).

Breastfeeding is lauded in our culture, but its actual practice may be experienced as strange. Support through this experience may be sought through ritual. As few rituals exist for this purpose, weighing has taken on this function. The messages of reassurance imparted during weighing encounters help to keep women feeling safe through implied vigilant scrutiny of adequate infant growth. This derives from and reinforces an overall understanding of breastfeeding as essentially nutritional (Dykes, 2004) rather than a part of embodied relations between two people. Adequately charted growth thus assumes central importance in the evaluation of a complex physical and emotional interaction between mother and baby.

Liminality

As described in the previous chapter, van Gennep (1960) delineated three stages for individuals moving through life changes: separation, transition and incorporation, with Turner (1969) describing these as pre-liminal, liminal and post-liminal. Mahon-Daly and Andrews (2002) apply the concept of liminality to the breastfeeding experience of women in the UK. In their study the first researcher attended a baby clinic postnatal group, gathering information from the mothers through participant observation¹⁶⁹. They discovered that liminality had explanatory power for their data. In my analysis of phase one data, this resonated with my findings, and I adopted this analytical concept, further

¹⁶⁹ In design, this had similarities to my attendance at the breastfeeding group in phase one. Their group was not confined to breastfeeding mothers: I also observed women who were not breastfeeding during phase one of my study during clinic observations.

exploring its 'fit' in phase two. In this chapter, I argue that it not only illuminates my data, but helps unite findings of studies examining aspects of the breastfeeding experience that indicate that the embodied practice of breastfeeding does not mesh with cultural expectations, despite many exhortations for women to feed babies at the breast. Concern voiced about breastfeeding in public, expressing milk, and returning to work, can be understood as demonstrating how breastfeeding is experienced as a marginal practice, fitting poorly with everyday embodied habits and routines of life.

Liminality stems from the Latin word *lumen*, meaning 'threshold'. 'Liminal' is defined as; "Of or pertaining to the threshold or initial stage of a process" (Oxford English Dictionary, 1979, p299); and as applying to the "threshold of a physiological or psychological response" (Morris, 1973, p758). Mahon-Daly and Andrews (2002) identify three 'levels' of liminal experience: an embodied state apart from usual norms; an emotional experience which may provide a transition to a new understanding of the self; and an engagement in practices which call for new negotiations of time and space in everyday life. They do not clearly identify how these levels are linked. I understand them as different aspects of the liminal experience rather than as levels building on one-another. Using the insights of Mahon-Daly and Andrews (2002), I examine my own data and suggest their characterisation of breastfeeding as liminal, encapsulated in an image of stepping over a threshold into an unpredictable space beyond, provides a way of understanding many findings of women's understanding of breastfeeding.

Babies as well as mothers are in transition after birth. Moving from two-in-one to a highly dependent existence: milk-fed, on the verge of personhood¹⁷⁰. Breast milk is a unique human food source. It provides nutrition but also fosters the development of many infant physiological systems (Jelliffe & Jelliffe, 1978).

Liminality, Childbirth and Breastfeeding

In chapter 10, I described how social transitions in many societies coincide with physiological transitions: being born, puberty, giving birth and dying. Other transitions, such as marriage, are more socially defined, but may involve changes in daily activity and living location. Transitions may thus involve physical (biological) changes, changes of place and everyday action as well as status change within community and family. During transition, individuals are in a state of 'becoming' or moving from one status to another. Transitional times could be narrowly or widely defined – during marriage a narrow definition would be the time of the wedding ceremony itself, while a wider definition might

¹⁷⁰ When I mentioned to my daughter that I was working on an understanding of breastfeeding as liminal, she responded with a comment indicating that she had immediately taken this to be from the baby's point of view. I had been thinking of how women experience breastfeeding as liminal; I am very grateful to her for reminding me to attend to the meaning of the experience for the other partner! Lothian (1995) provides a study of the contribution of the baby to the perceived success of breastfeeding: this is an area little examined.

include betrothal/engagement, and honeymoon phase¹⁷¹. Liminal, transitional, phases are also usually felt to be times of particular vulnerability, during which special supportive rituals may be offered by others or undertaken by individuals (Douglas, 1984); marriage customs are a vivid case in point. Childbirth is recognised as an important transition in most cultures, where the physical changes of becoming a biological mother are accompanied by becoming a social mother (Kitzenger, 1992). For a baby, birth may be followed by a time of uncertainty as to whether she/he is physically normal, and a period of liminal social status, before rites (such as baptism) have been performed to incorporate him/her into personhood.

Davis-Floyd (1992) characterised birthing practices as rituals used to ease passage through liminality and into the new social status of motherhood (also Rothman 1982). The message imparted in modern birthing is that women need technology to aid them; their faulty bodies require assistance (Martin, 1987). Kitzenger (1992) supplies ethnographic comparisons from other societies, where childbirth rituals convey the values and imply the relationships between women, their infants and others of that particular society.

A number of researchers have described the breastfeeding experience in ways which echo the concept of liminality. Schmied and Lupton (2001b) remind us that pregnancy is also a period of “liminal two-in-one bodies” (p38). Dyball (1992) and Balsamo (1992) refer to a period of “limbo” just after birth (p184; p71), when woman’s identity is shifting to take account of the new mother she is becoming. Hunter (2004) notes the early weeks as a time when “couples withdraw from society, in order to adapt to and adopt their new parenting roles” (p26). For a breastfeeding woman, this is further complicated by the discovery that, despite having physically given birth to her baby, she is still not physically separate, but remains “motherbaby” (Cusk, 2001, p93). Spiro (1994) found that for Gujarati women in the UK, Indian notions of “time out” after birth in which the mother focuses on her relationship with her baby, and the “flow” of milk, conflict with western ideas of “linear time” (p33).

Raphael (1973) suggested the ease of the passage to becoming a mother is related to support received. Many researchers have focussed on support for breastfeeding, aiming to find what works in terms of initiation, continuation, and the satisfaction of women (Sikorski et al., 2002). Studies focus on various sources of support, which may be conceptualised in a series of rings or layers encasing the mother; with individuals immediately involved in supporting in a tight ring around her, with wider rings of social approval and legislation enclosing the inner circle (Tiedje et al., 2002). I noted in chapter 10 that different types of support require careful definition. The literature on support helpfully demonstrates how many actors and factors impact on a woman’s experience; however a static model of these does not easily account for how women negotiate breastfeeding. Women may

¹⁷¹ These times are those which have been traditional in Britain.

feel ill-prepared for the transition to motherhood, and worry that their personal experience is not normal (Miller, 2002); fearing to voice this contributes to continuing silence about the reality and perpetuating the “saccharine-sweet” image of new motherhood¹⁷² (Kitzenger, 1992, p190; also Brown et al., 1994; Hoddinott & Pill, 1999b; Cusk, 2001). Our society celebrates romantic and sexual love, but there is public recognition of the complexities of maintaining and nourishing such relationships. In contrast, the mother-infant breastfeeding relationship is seen in much rosier focus. Even those working to support it in western contexts may feel they must present the best side in public for fear that otherwise women will be put off (Thurer, 1994; Hausman, 2003).

Rogan et al. (1997) note that “new motherhood is characterised by profound change, a strong sense of loss, isolation and fatigue” (p877) and that women are “forced to undergo a profound reconstruction of self” (p884). Miller (2002) highlights differing understandings between health professionals and women of the amount of time this transition takes, with the latter finding it much more protracted. Western society gives scant recognition to the transition through the liminal period, and few ritual occasions mark it (Kitzenger, 1992).

Many rites are performed at a western birth: checking reflexes, washing, clamping the cord, and, of course, weighing. This initial ‘checking’ of the product of the mother’s birthing sends a powerful message about the ‘productive’ nature of birth; echoing quality control measures on the production line. These checking rituals may actually compete with the physiological process of initiating breastfeeding and disrupt mother-to-baby contact: this is reflected in recommendations not to interrupt mother-baby contact after delivery¹⁷³ (WHO, 1998; AAP, 2005). Weighing may be repeated in the first weeks; indeed pro-breastfeeding medics urge its meticulous use (Powers, 1999, 2001; Neifert 2001, 2004). As shown in chapter 8, the simple avoidance of weighing, without explanation or replacing it with other activities to reassure women about the efficacy of breastfeeding and the physical well-being of their babies, has little positive impact on increasing women’s confidence in their embodied capacity to nourish. Mother and baby receive a final post-birth medical examination at six weeks: the timing may be a remnant of practices of lying-in and churching which marked reincorporation with the community. This is a medical rather than a social event: social rituals such as churching have not been replaced (Leach, 1994). Floyd-Davis (1992) asserts that the messages of medical management of childbirth affirm the ascendancy of technology, science and medicine: the conclusion of the medical event of childbearing with a medical check-up completes this message.

I suggested in chapter 7 that the entire period of milk-only feeding is liminal for the baby. Formula feeding actually makes this less unusual since the baby is relying on purchased food, as is usual in

¹⁷² “She is ...in soft focus, sitting in the lamplight with her baby at the breast (but without any of her breast actually exposed)...as she gazes at her sleeping baby.... You cannot imagine her ever having intercourse or giving birth.” (Kitzenger, 1992 p 190).

¹⁷³ Step 4 of the ‘Ten Steps to Successful Breastfeeding’ addresses this point (WHO, 1998).

western societies (van Esterik, 1989). When a baby is breastfed, he is in an unusual relation to another human being, similar to fetal life. When a mother starts and continues breastfeeding, she also inhabits a phase which is seen as unusual and temporary. All new mothers experience liminality, as they negotiate a transition to becoming a mother, but breastfeeding mothers are in a state of heightened liminality, a time when boundaries between mother and baby are blurred (Schmied et al., 2001; Schmied & Lupton, 2001a).

I turn now to the three levels of liminality identified by Mahon-Daly and Andrews (2002) and examine the data in my study and in other research studies which can be considered to demonstrate the liminality of the breastfeeding experience in the contemporary UK and similar western contexts. I suggest that this frame provides a useful way of understanding women's experiences and the impetus for seeking reassurance through weighing ritual.

The Breastfeeding Body

Physiologically, women's bodies after birth are different than during pregnancy or pre-pregnancy states. One aspect of this is breast changes accompanying lactation. The delivery of the afterbirth triggers lactogenesis; if a woman does not breastfeed, initial production of colostrum ceases and breasts return to a state similar to pre-pregnancy (Lawrence & Lawrence, 1999). If she breastfeeds, physical breast changes continue. A number of bodily sensations accompany the physical act of breastfeeding and may take some adjusting to (Bartlett, 2000). These are unfamiliar, not just because women's breasts undergo physiological changes but because of the novel sensation of the baby suckling¹⁷⁴. One expectation of breastfeeding in our culture is that 'it hurts' (Dykes, 2004). Many women do experience pain in the early days of breastfeeding and this is one of the commonest reasons for stopping in the first two weeks (Hamlyn et al., 2002): it is a matter of debate how much of this pain is physiological and how much due to inept teaching of the physical skills of breastfeeding (Renfrew et al., 2000). My study included women who had already continued breastfeeding to health visitor care, so this experience may have been less mentioned, but it was alluded to by several women. Bethany told me about the first week:

I just carried on feeding her and it was a bit painful, you know, it was a little bit uncomfortable but you've just got to carry on really, 'cos you get past it, and you are all right then (1:i).

Rachel, whose baby was eight weeks old, asked others in the breastfeeding group; "Is anyone else struggling with breastfeeding? I am really sore" (BG:f).

Even breastfeeding which is pain-free presents unexpected bodily experiences.

¹⁷⁴ Although women may have experienced sucking on their breasts during sex play (Giles 2003): the use of sexual activity to describe sensations in anticipation of breastfeeding is fairly taboo in western society (Palmer, 1993).

I overhear a conversation between Diane and Isla about milk spurting. Diane (baby eight months) can still squeeze and spurt across the room. Isla was astonished when she saw hers spurt, had no idea beforehand. First time I have heard much about the embodied experience of being a lactating woman discussed in the group (BG:f).

Isla's comment illustrates a lack of knowledge about the behaviour of lactating breasts. These two women were amused at these sensations; others may find them intrusive. Alex said with distaste: "my breasts were leaking all the time. I'd fed her and my t-shirt was just covered" (2:1). Comments on leaking point to the challenges of maintaining bodily boundaries and maintaining control of body fluids. Individuals are generally expected to keep snot, menstrual blood, even sweat, invisible (Bramwell, 2001). Morse and Bottorff (1989) found most of 61 women they interviewed still experienced leaking at six months¹⁷⁵, although this was seldom mentioned, or strategies given for managing it, by health professionals. 'Solutions' have been offered commercially (Bramwell, 2001), providing an opportunity to enmesh breastfeeding mothers into consumer behaviour and decreasing the monetary cost differential between breastfeeding and formula feeding. A recent survey of 149 Liverpool mothers found that breastfeeding women spent more per week on infant feeding than did women who were wholly formula feeding (Berridge et al., 2004)¹⁷⁶.

Spending money on aids, such as pumps, breast pads and pillows may help to normalise women's understanding of breastfeeding as a method of infant feeding: buying baby equipment is an important part of preparation and early parenthood ritual in our society. The plethora of advertisements for such aids to women and health professionals sends messages of technocratic superiority. The product of women's bodies is improved and controlled by the use of gadgets. Health professionals are intermediaries whose role is providing helpful technology¹⁷⁷ (Grouse, 1983). Ironically, though, some of these can cause other problems (Colson, 1998)¹⁷⁸.

Britton (1997, 1998) conducted focus groups investigating how women experienced the physical sensations of the let-down reflex. She found that many had not discussed these embodied sensations previously; they were surprised to find how their experience varied from other women's. Some said how ill-prepared they had been by descriptions. If body sensations of breastfeeding come as a surprise, women may be left wondering if what they feel is normal.

¹⁷⁵ Of course, the fact that leaking was common in this group of women does not mean this was due simply to physiological factors. The style of bra, use of breast pads, limiting feeds, etc., may have affected this physical process – the study does not report any consideration of such factors.

¹⁷⁶ One mother was spending more than £60 a week on breast pads, and another had spent £60 on a repair man's call-out fee when a breast pad became stuck in her washing machine (Berridge et al., 2004)!

¹⁷⁷ A recent personal account of breastfeeding by a US mother reads, in places, like a list of product endorsements for all the aids she tried and the differing varieties of paid lactation support she accessed (Shapiro, 2004).

¹⁷⁸ Colson (1998) describes how breastfeeding pillows may cause back strain and nipple pain as they encourage women to 'hang' over their babies.

Women mentioned concerns about supervising their diet or other intake to make sure the milk did not become unsuitable (Gabriel et al., 1986). Anne (1:f) asked if her probiotic yoghurt drink could be affecting her baby (only partially breastfed). Wendy discussed concern about her baby's restlessness:

We thought it might be something that she was getting through the milk... But we haven't got a clue what it is -- the only thing we could think of was coffee... although I've switched now to decaffeinated and it hasn't made the slightest difference to her (2:2).

Wendy not only felt the need to examine her diet minutely, but that she might have to alter her habits. Marie went further in suggesting her milk might not be suitable:

I gave [first child] the bottle at night... I thought, that would probably have more vitamins in it, might have some more healthy things that my body might not have (2:1).

Zoë linked her body size to possible milk quality: "with me being heavier I might be giving her milk that's on the fatter side" (2:2).

This coupling of body size to milk quality might repay further investigation. During this research, I have been intrigued by this. Western women are taught from childhood that they need to manage their weight and are presented with prescriptive body norms. The way this carries over to their responsibility for the body norms of their infants appears to act an occasion of 'inversion' (Davis-Floyd, 1992). Inversion describes ritual practice in which individuals are put in situations opposite to usual everyday ones, and which emphasise the liminality, or strangeness, of experience during transitions. Ordinarily women are expected to wish to maintain slender bodies, with large breasts for display: during breastfeeding, women are charged with the responsibility for producing a chubby baby body, while their own body may be experienced as fat and flabby (Bailey, 2001; Earle, 2003). Their breasts are discussed and viewed by professionals as functional sites of breast milk manufacture and judged on these criteria. This is in contrast to usual evaluations of sexual attractiveness (Yalom, 1997; Giles, 2003).

Exercise, too, might be felt to compete with the baby's requirement for milk. Jemma spoke of deciding to stop breastfeeding so she could exercise: "She did well on it, but I needed to de-stress, it was a case of balancing our needs" (1:f). Una returned to running and, a few months later, told me; "I did a race both on Saturday and Sunday, and my milk supply ... just really went down and he was trying to feed all the time again" (2:3). Moderate exercise actually appears not to affect immunological components of milk or calorie content¹⁷⁹ (Lovelady et al., 2003).

¹⁷⁹ Indeed, it would be curious if a system developed to ensure the continuation of the human race were to be damaged by the sort of physical effort probably usual for our ancestors for thousands of years. This concern about exercise and breast milk is an example of cultural norms of behaviour assumed to be physiological norms.

Every aspect of the embodied self may be examined for adequacy and for possible sources of harm to the baby and this perceived need for continual attention to everyday practices of the body can seem intrusive to many women (Gabriel et al., 1986). In contrast, the use of formula was not examined with such concern. Sarah said: “She will take formula, she’s had about two or three bottles...Just to see if she would really” (2:1). As a health visitor, Sarah might be expected to have a greater knowledge of the biological differences between formula and breast milk, but did not mention this as an issue she considered when giving it to her own baby. Women who required themselves to maintain their bodies suitably for milk production simply trusted an industrial product derived from anonymous cows. Changing to bottlefeeding allowed a lessening of embodied accountability for the well-being and growth of the baby.

This interdependency of the enmeshed bodies of mother and baby challenges the western notion of individuality, separately embodied (Hausman, 2003, 2004). The ideal that individuals be self-sufficient and self-regulatory is evident in ideas enforcing infant feeding and sleeping routines (Hausman, 2003), and also in the surprise and distaste women feel in finding fluid leaking in response to baby’s cries, and the effect of their actions on the baby’s feeding or digestion. Lawton (2000) describes the liminal identity of dying hospice patients, who may depend on carers to help them complete simple bodily functions, including elimination¹⁸⁰; this erodes their personhood in the minds of relatives. The loss of agency leads to a social death which may take place before physical death. Although the parallel may seem extreme¹⁸¹, women who are not fully separate from their babies may feel unacceptable to themselves, as well as to those around them. Marie anticipated stopping: “I would like my body back” (2:1). However, Olivia voiced an alternative:

Breastfeeding is about closeness and intimacy, the most intimate feeling you can have. And, that’s what they are there for. I have yo-yo dieted all my life and I have never been happy with how my body looks, but suddenly its not about what it looks like, it’s about what it’s doing and it’s doing a damn good job (2:1).

Breastfeeding had taken her to a new level of body confidence. Because there is little discussion of the lived course of breastfeeding, women may come with expectations that it will happen as a matter of course, feel natural and not require agency on the part of the mother. Mandy told me: “I think perhaps there’s not enough information about how hard it is at first. And how much you have to focus, just on breastfeeding” (HV:i). Mandy’s statement may relate not just to observations of women in her care, but to her personal experience. What was striking was a lack of attempts to address this in interactions with women. Health visitors simply got on with advising about individual

¹⁸⁰ The word elimination is related to liminality – in this case describing a process of pushing waste products out of the boundaries of the body. The distaste for milk as a process of elimination by analogy with other elimination functions is a theme of some analysis of breastfeeding (Bramwell, 2001).

¹⁸¹ It is interesting that both states of interdependency during dying and during breastfeeding are ones which our society has devised ways of secluding (in hospices and by encouraging women not to breastfeed in public) and avoiding, through heavy medication and use of breast milk substitutes.

problems or situations women presented, without acknowledging the larger context. Rosemary confirmed professional silence:

Nobody ever told me – we went to parentcraft classes, and they went on about how to bath a baby and labour and pain relief and what to buy and what not to buy and we did do a bit of feeding – but nobody ever told me how hard breastfeeding was (2:1).

Breastfeeding and Managing the Public Gaze

Mahon-Daly and Andrews (2002) identify the actual practice of breastfeeding as problematic as regards the places in which it can be done. The literal meaning of 'liminal' derives from threshold, and uncertainty surrounding where and in front of whom a mother may breastfeed can be conceptualised as being about the negotiated placement of the threshold of the space within which it can be done. Seeing women breastfeeding may be unusual for many in the UK. Hoddinott and Pill (1999a) found that the first sight of a woman breastfeeding made a lasting impression on women themselves and influenced feeding choices. Those with low body confidence might feel unable to embark on an embodied form of feeding after seeing it. As one respondent remarked "it's not the breastfeeding that's offensive, it's the use of the breast" (Hoddinott & Pill, 1999a, p 33), as if the form of nourishment was acceptable, but the feeding vessel suspect¹⁸².

Women in western societies frequently cite the challenges of breastfeeding in front of others (Carter, 1995; Murphy, 1999; Stearns, 1999; Pain et al., 2001; Scott et al., 2003). The juxtaposition of the breast as sexual and simultaneously maternal provokes discomfort when infants are fed in public (Palmer, 1993; Yalom, 1997; Hausman, 2003). Women may adopt measures to cover up as much as possible during feeding; Murphy (1999) noted that prospective mothers appeared to feel compelled to defend themselves from possible charges of immodesty.

Although my study did not focus on this, many women mentioned it, especially when asked if there were anything further they wanted to comment on¹⁸³. Wendy restricted her activities over the whole six months: "I just won't go out! I know it sounds a bit daft, but... it's too much planning" (2:3). Despite having fulfilled her hopes of continuing breastfeeding and achieving enough confidence in her ability to nourish her baby so that she ceased to weigh, discomfort at feeding in public proscribed her activities. Tessa's neighbour felt that if Tessa stopped expressing she would literally be stuck behind the threshold of her own house. The idea that a woman might have a phase in her life in which she accepts limitations of movement in order to more easily responding to her infant's needs appears to challenge norms of the mobility of the self. Murphy (1999) found that all the Nottingham

¹⁸² This may relate to this woman's understanding of the breast as a sexual object.

¹⁸³ This illustrates the value of such open-ended questions. At the start of phase two I was a bit disconcerted to be collecting so many comments on something outside my study, but the frequency with which women mentioned this convinced me of its importance in framing their entire experience of breastfeeding.

women she interviewed who intended to breastfeed talked about expressing which may be linked to resisting the idea that early motherhood involves spatial prescriptions (Brown et al., 1994). Women who had decided to bottlefeed spoke about the freedom of movement this would give them and particularly linked it to ability to get out to work (Hughes & Rees, 1997). Labour mobility is a feature of capitalist production, and although these women had not returned to waged work, the idea of maintaining oneself as a compliant worker-in-waiting, available to move as required, is a feature of our society (Campbell, 1984).

Maintaining mobility was a challenge for women in this study. A number described in detail particular outings as landmark occasions. These tended to be to shopping centres and eating places. While women may not be returning to productive labour so soon after the birth, self-restriction from such outings would curtail their activities as consumers. Olivia confirmed that “going out, that’s the biggie” (2:1). Tina remarked on the general reaction women would face:

You know if you go into McDonald’s or anywhere, they want you to sit in the toilet. And then if you do sit in the café and feed your baby, people are tutting and blowing, aren’t they? We’re not a culture that accepts it (HV:i).

Marie projected blitheness when she said “you’re forever whipping your boobs out in public.” (2:1), asserting she had no problem with it. However, when describing an actual outing she reported:

We found a corner, me mum sat in it and I sat facing her and I thought the only people who can see anything is the people in this corner, if they’re looking (2:1).

This sounded as if she, in fact, took great care in placing herself. Paula saw not needing to take bottles made going out easier but still showed the limits this placed on feeding venues: “I’m mainly feeding in car parks at the moment” (2:1).

Carter (1995) noted that the performance of breastfeeding may be problematic not only in public spaces but within the home (also Britton, 2000). Una used expressing as a way of managing the tensions she and her partner felt about breastfeeding in front of others. Jayne commented on feeding in front of friends in her home, “I wasn’t sure how I would take to it” (2:1), suggesting that the act of exposing oneself in this way is so unusual that women have no compass to gauge feelings in advance. Zoë told me she was going to stay with friends:

I’m a bit apprehensive about how they’ll feel. But, I mean I’ll ask, because it’s their house. I do what I like in my house and I do what I like in public, but I think if it’s their house they have a right to an opinion (2:1).

Even when certain spaces had been negotiated, new ones might require re-negotiation.

Breastfeeding and Time

Mahon-Daly and Andrews (2002) found “linear time constraints made breastfeeding appear ‘too time consuming’” (p71). This echoes other studies (Maclelean, 1989b; Dyball, 1992; Spiro, 1994; Smale, 1996; Dykes, 2004, 2005a). As noted in chapters 2 and 7, restrictions on feed duration, feed frequency, sleep routines and absolute duration of breastfeeding have limited time at the breast (Millard, 1990; Smale, 1996; Dykes, 2004, 2005a). Women experience contradictory pressures not to spend too much time feeding, yet to meet infants’ needs as good mothers (Thurer, 1994). Hausman’s (2003) analysis of discourses commonly available to US mothers in the literature of formula companies and mass-market child care books shows how these frame infant feeding method as a choice, and present formula feeding as the implied norm, so that feeding frequencies, sleeping durations and concerns with measuring intake, which are aspects of formula feeding, come to be applied to the experience of breastfeeding, which may fall short of the ‘default norms’ formula feeding sets. Women thus feel required to justify spending time on breastfeeding, and may do this by citing the ‘benefits’ breastfeeding bestows above the level of health and nutrition implicitly set by formula feeding (Wiessinger, 1996).

Most women in this study told me that they valued breastfeeding because of its health benefits, but few articulated any clear understanding of these. Val had personal experience:

I know myself, me and my sister, she was bottlefed. And when she’s ill she’s really ill, but I’m hardly ever ill... I just thought it does make a difference (2:1).

Tessa, one of the women most committed to breastfeeding in this study, said:

[People say] formula milk these days is pretty much as good as breast milk. I was thinking, well, in a way, maybe it is, do people die from it? But to me it’s a lot more about the bond (2:1).

In fact, a retrospective investigation of US infants showed a decreased risk of death in the first month for breastfed babies, demonstrating that even in western contexts, infant formula may result in increased mortality (Chen & Rogan, 2004)¹⁸⁴. Such biological differences between breastfeeding and formula feeding were unarticulated by these women, leaving the special feeling between them and their babies as the chief reason they could put forward for investing time in breastfeeding. In Murphy’s (1999) interviews with pregnant women, they felt accountable in various ways for their feeding method. For instance, they expected to use pumping to ensure that their partners experienced the emotional rewards of feeding. Taking time breastfeeding and building a bond between mother and baby could be seen as selfish. Men are understood to require equal time undertaking the same tasks as women to form a relationship with their babies (Leach, 1994). As Ulrike told me:

¹⁸⁴ The authors caution that other differences between mothers who choose to breastfeed may partially account for the differences; also the US health care system may amplify the likelihood of infant death for lower socioeconomic groups – who are less likely to breastfeed – as there is no universal health care system as in the UK.

It's hard for the dad because he's frustrated...he cannot take part.... She only started to go in his arms. Before he couldn't really do anything, because it was just mew mew, she just wanted to ...be with me(1:i).

In the observations and interviews I conducted, concern with frequency of feeding, time spent on feeding, grappling with the seemingly limitless desires of babies for contact were evident. Women voiced desires to exert control and limits to it, or at least to be able to predict when feeds would be requested. Ulrike indicated how she found this: "you always have her and you feel like: God just give me a rest please, just for 2 hours" (1:i). Alex said:

I've got a nephew... and she breastfed him... he used to go every two hours during the night. And my neighbour ... was saying, 'oh mine used to go two hours, don't worry about it'. So then you're thinking to yourself, 'oh is it normal then?' (2:1).

Nadine told me "He's been pretty good from the beginning. I mean he does feed quite often, but at least you know roughly when" (2:2), implying that frequent feeding was all right if it was predictable. Most of the mothers in the study considered that they fed on demand¹⁸⁵, but also mentioned a usual interval between feeds. Millard (1990) characterises recent medical advice about demand feeding as "an ambiguous concept necessitating maternal interpretation of infant demands in order to maintain a regular sequence of infant demands in order to maintain a regular sequence of feedings spaced well apart"(p217); it appeared that these women generally understood it in this way. Wood et al. (1997) interviewed women who had experienced post-partum depression; they identified feelings of isolation and confusion at the reality of demand feeding and hard-to-settle babies, compared to the "Western cultural fantasy that women will give birth to perfect infants" (p310).

Observations from a wide variety of societies have noted different frequencies of infant suckling. Where babies are carried next to their mother's bodies most of the time and have free access to the breast, they may suckle several times an hour¹⁸⁶ (Palmer, 1993; Hrdy, 2000); most women in a western society are unlikely to match this. It seems that cultural sensitivity to cues for feeding and the level of restriction on access to the breast is dictated by norms of clothing and baby carrying. Una, in describing herself as feeding on demand said: "I just feed him when he screams" (2:1) – a baby may exhibit many earlier cues that he or she wants the breast, such as mouthing, and whimpering. If a mother offers the breast at the first (or an early) sign of infant interest, interfeed intervals may be shorter, with feeds more frequent, and the baby may not have to scream for food (Biancuzzo, 1999). Such frequency is challenging to women's expectations. Rosemary noted; "nobody ever told me that

¹⁸⁵ A number of alternatives have been suggested to the term demand feeding, however this is how women described it. It is interesting as it links with the imagery of industrial production. Supply and demand are terms familiar in economics and business.

¹⁸⁶ Although Hausman (2003) cautions against taking this as a somehow ancestral pattern, noting that all peoples have developed their customs through centuries of culture and also that the most frequent suckling patterns come from groups currently in the most marginal habitats.

they would need feeding every two hours or every hour, even¹⁸⁷. Nobody ever seemed to mention that"¹⁸⁸ (2:2). Alex described her 10-day old baby's feeding:

I last fed her about 20 past three this morning, she woke at 20 past seven and then... she just wanted top-ups and that was until about half ten this morning. And I just sometimes think to myself, what's wrong with her, why does she want to feed so much all the time? (2:1).

Some women in the study indicated that they followed a responsive approach. Wendy told me: "It's just more of a case 'well she needs a feed' and you just give it. I lose track of when she's fed" (2:2). Hannah was perhaps more typical in seeking a pattern to follow: "She is five and a half months now, by six months how many times a day, on average, are babies breastfeeding?"(1:f). The expectation that there was a specified normative routine for feeding which mothers would learn from the medical expertise of the health visitor and then fit their baby into was strong. Health visitors appeared to see their role as offering advice on how to attain this, rather than giving information that randomly timed feeding is normal and conflicting demands of mother and baby may be open to some negotiation without curtailing or supplementing breastfeeding. The early experience of breastfeeding appeared to involve challenges to the mothers' expectations of their postnatal ability to maintain routines, with little validation for the idea that a different style of life, less subject to routine, might be chosen for the time-being. There may have been a dilemma for health visitors between offering tips on how to attain the cultural standard and telling women the bad news that babies do not conform to expectations. Anne reported that her eight-week old, partially breastfed baby had been waking frequently and Liz replied; "It's early yet for any routine" (HV:f). Such a reply does not challenge the assumption that a routine is the desired goal. Mandy asserted "Mums around here are workers with high-flying jobs. They can't get used to not knowing when the baby needs feeding" (HV:i). Cusk (2001) describes personal experience of "a period in which time seemed to go around in circles rather than in any chronological order" (p9), but that "with the end of breastfeeding my sense of normality was duly returned to me" (p108). Losing control of their time may be one of the biggest shocks of motherhood for western women (Stadlen, 2004).

Gerhardt (2004) summarises recent literature on the development of infant social affect during the early months of life and illustrates life-long consequences of maternal responsiveness in developing the ability to relate to others. Feminist researchers and writers have engaged in debate on the issue of essentialising women through asserting that breastfeeding is important, even fundamental (Carter, 1995; Blum, 1999; Bobel, 2001, Haumann, 2003; Dykes, 2004, 2005b). However the issue of how deeply essential breastfeeding and its emotional and embodied interactions are to babies has not been entered into these discussions. While infants clearly survive on breast milk substitutes, the

¹⁸⁷ In fact, many babies feed more frequently than every hour (if allowed), usually in a 'cluster' of feeds at certain points in the 24 hour day (Biancuzzo, 1999).

¹⁸⁸ Rosemary's wording echoes that of a woman interviewed by Hoddinott and Pill (1999b) and the title of their paper.

consequences of depriving them of an embodied, time-intensive relationship may be colossal¹⁸⁹. This contact need not always be supplied solely by the mother; the fact that it usually is, and that mothers are isolated in charge of their babies, is a result of our particular social arrangements (Hrdy, 2000; Büskens, 2001; Stadlen, 2004).

Expressing Milk: Uses in Managing the Transitional Stage

In this study, expressing was frequently mentioned and all women in phase two spontaneously explained their position on it to me. Even where women did not in fact express, they told me why. Expressing was assumed to involve a pump¹⁹⁰. In analysing women's comments, I noticed one of its functions was helping the 'fit' of breastfeeding into their lives.

Una expressed milk easily and regularly. She explained her husband would not want her to breastfeed in front of his friends. "I just tend to express some and then if I ever go out, or anyone comes around, we've got a bottle there" (2:2). Expressed milk allowed her to manage her social life and continue breastfeeding¹⁹¹. The ease of expressing and the ability to leave her baby with other caretakers and avoid breastfeeding in public led her to revise expectations of weaning her son off the breast when she returned to work. Instead she decided to continue to express milk and breastfeed. Several other women commented that they used formula when they returned to work because they found expressing unsuccessful.

When women feel they must return to work after four to six months, and do not have flexible work arrangements or work-place childcare, expressing may be an important factor in continuing breastfeeding. None of the women reported having had help with expressing by hand, or receiving any practical instruction in expressing with a pump. I also did not witness any discussions of this in the breastfeeding group or clinic. Despite a lack of instruction, mothers took any difficulty with expressing as a marker of their milk supply; "I don't seem to produce enough to express", Nadine told me (2:2)¹⁹². As well as finding expressing difficult, some women found it physically unpleasant. Rosemary told me "I've had one go, and it hurt" (2:1). Rachel said:

¹⁸⁹ Actually, it may be that there are ways of deepening interaction and increasing the physicality of feeding via a bottle. It would make sense to use these if formula, or expressed milk, is used in situations where a mother is dead or otherwise unavailable. It would hardly be useful in satisfying the requirement that babies be easily detached from their mothers and fitted into child care arrangements while their mothers return to work and shopping.

¹⁹⁰ The local hospital did not teach women to hand express, and no woman mentioned knowing that they could do this. At the time I was collecting data, I was not focussing on this: I became interested in its use as a strategy for managing liminality during data analysis.

¹⁹¹ Interestingly, she described an occasion when a teenaged girl, who was visiting, fed the baby a bottle of expressed milk during the visit. The visitor was experiencing bottlefeeding of a wholly breast milk fed infant. I could only speculate what messages she had received.

¹⁹² Of course, this could be the case for some women. However, it may also be the case that mothers were unable to express effectively and this could have been improved with better teaching of technique.

I am put off by the noise... I just have to turn up the telly and not look – I don't like seeing my nipple all pulled out of shape (BG:f).

It also became another chore to fit in:

I mean I couldn't really see how I was going to give her a feed and express milk as well, in between, [but it's] not giving me time, in between, to do anything else (Wendy, 2:1).

Expressing could make a woman's day even more crowded with new practices.

The emotional experience of expressing has received little attention: Morse and Bottorff (1988) found the breastfeeding women they interviewed were surprised that expressing was "not automatic, reflexive or easy" (p166). Davis-Floyd (1992) analysed messages conveyed to labouring women as they are physically hooked up to the monitors and drips during hospital labour. Placing pumping centrally in the breastfeeding experience may deliver a similar message: the biological product of the female body needs to be conducted through a machine. Once extracted, it can be 'commodified': measured, the quality noted; and fed to the baby when the mother is elsewhere (Rothman & Simmonds, 2003). Use of expressed milk may result in "the belief that infant formula and breast-milk are equivalent products – products served in the same container but coming from different sources" (Van Esterik, 1996, p273). Zoë, whose baby was readmitted due to severe weight loss expressed her milk so that the quantity could be monitored. When I asked about the effects of this she answered:

I think if they'd said at the hospital 'oh you're not producing very much milk, are you' it might have made me rethink it. But since they were quite happy (2:2).

The measurement of her milk did not lead Zoë to question her ability to breastfeed; she perceived no negative message. An in-depth exploration of the messages women receive through information about their expressed milk would be of interest.

In our society, separation of mother and baby is presented as usual, and behaviour which keeps the biologically linked dyad together during the first weeks and months after birth requires explanation. Thus, although the liminal phase is also a phase of separation from old identity (van Gennep, 1960), our culture perceives the separation of the mother from usual forms of social interaction as strange. In an extreme example of the expectation that mothers and babies are separate, Olivia told me:

I read in a book that it is a good idea to have six or eight feeds in the freezer in case something happens and you have to go into hospital... if something really happened, like I got knocked over, there would need to be more than six to eight feeds! (2:2).

This appeared to be a routine message to prepare for the (unlikely) possibility of the ultimate separation. Formula-feeding women do not receive equivalent messages to stockpile formula and sterilising agents in case of flood, terrorist attack or to hoard 'ready-to-feed' cartons in case of power

cuts. The infrastructure of modern society is simply taken for granted as a condition for feeding choice¹⁹³.

No mother mentioned being told that expressing was optional. Health visitors appeared to share an uncomplicated view that pumping and using expressed milk was part of breastfeeding and needed no extra discussion as to how it could support some breastfeeding goals (e.g. time away from the baby) while having potential negative effects (e.g. giving a false impression of poor milk quantity; causing nipple trauma¹⁹⁴). Some women who did not express had found it was another chore or that they simply decided not to separate themselves from their baby. This had implications for their ability to participate in a variety of social activities. Tessa told me her neighbour had said; “oh you’ve got to keep doing it [pumping], otherwise you’ll never have any time, you’ll never be able to go out at all” (2:2). Tessa timed expeditions to the swimming pool when her baby slept, and decided to give up one evening activity temporarily. She had become adept at expressing when her older daughter was a baby; eschewing it this time was her choice. Her neighbour’s comment shows this decision to surrender to a time of intense contact with her baby might be socially ‘strange’.

The Breastfeeding Journey – Duration and Destination

Mahon-Daly and Andrews (2002) describe a third aspect of breastfeeding liminality as the creation of new understandings of the self during the time of transit through the experience. In my study women generally seemed to expect breastfeeding to occupy a brief phase in the first part of their baby’s first year. For example, the breastfeeding group was the one physical space in the town where women could be sure of a focus on this issue; yet they told me that they stopped attending at about the time their babies reached six months. For many this was due to returning to work; others felt that it was time to move on. Many felt that as their babies got older they were only helping others.

We didn’t have any questions really... But we just feel that it’s been such a lifeline to us, that if we don’t go and support it, and somebody new turns up... (Rosemary, 2:3)

The general view of the group as somewhere to come if you were having problems, with particular emphasis on the early weeks, became a self-fulfilling prophesy. Two women who had breastfed their first children to 2 years did not come at all. Olwen mentioned physical limitations of the room which meant she stopped attending when her daughter could move around. Thus the one space dedicated to breastfeeding mothers in the local town was felt to be restricted to young babies, and to have a focus on the downsides of breastfeeding. There was literally nowhere to go where breastfeeding as a normal activity into toddlerhood could be explored and shared.

¹⁹³ It seems tragically possible that the aftermath of the hurricane Katrina which hit the Gulf Coast of the USA in August 2005, may highlight the preconditions needed for adequate formula feeding.

¹⁹⁴ Poor pumping technique can damage women’s nipples (Mohrbacher & Stock, 2003).

Nadine felt her milk supply could not be kept up after her return to work, and said: “I do feel quite conscious that I’ve taken them on to getting on to the solid stage... it makes me feel a bit happier about the fact that I’ve got to stop” (2:3), while Zoë told me “In some ways, I’m loathe to go onto solids. From the point of view of, I’ve achieved this” (2:2). Breastfeeding appeared to be conceptualised as occupying just this brief time, with an inexorable need to introduce other foods and reduce breastfeeds. Several mothers commented on the messages they had received about this. Olivia said:

I saw a TV debate. I was fuming because the doctor said that there was no benefit to the breastfeeding for the baby after three months. I was gob-smacked. Even if it’s the case, what about the benefit for bonding and the relationship? (2:2).

Wendy noted a similar message:

I’ve read a few books where it says that as long as you do it for at least first three months... there’s no conceivable difference between formula milk and breast milk after that. But I don’t believe that (2:2).

Information sources thus presented statements these women felt they needed to resist. Media representations¹⁹⁵ of infant feeding in the UK have been found to show bottlefeeding but usually just to talk about breastfeeding (Henderson et al., 2000). In television dramas breastfeeding often “provided humour around the themes of ‘out of control’ body, embarrassment, and the sexuality of breasts” (p1197); while “bottle feeding seems to be normalised and represented as the obvious choice” (p1198).

Sarah, mentioning friends asking if she would wean so she could drink at a wedding, said “for some people it might matter, but it’s only a year of your life!” (2:2) indicating that she saw the whole period of breastfeeding as a time in which she needed to look after her milk. Women thus varied on how long they saw the breastfeeding time as lasting; however the sense that this was a particular period of one’s life remained.

This sense of breastfeeding as something ‘other’, belonging to the early months of life with weaning off the breast in the second half of the first year (at the latest) being the normal transition, means that women who continue experience what might be described as prolonged liminality. Bearing in mind that breastfeeding itself prolongs and intensifies the liminal post-birth phase, breastfeeding longer than ones’ peers further extends this. A few researchers have examined women’s experiences of longer-term breastfeeding, providing hints that prolonged liminality is experienced. Wrigley and Hutchinson (1990) found women “moved in pace” with the child’s needs for feeding (p37); and “surrendered control” (p38); forming a ‘secret bond’ with their child. Ordinary expectations of boundaries and schedules were laid aside. Hills-Bonezyk et al., (1994) note women continued because they were not ready to give up, and that they had entered into a period of “mutuality and

¹⁹⁵ Although the books Wendy was speaking about were likely to be baby care manuals.

exchange” with their babies (p211). Britton (2000), found that women who breastfeed until toddlerhood realise that they were deviating from the norm, and feed clandestinely (a more negative way to describe the secret bond). Gribble (2005), investigating long-term breastfeeding, included a questionnaire for the breastfeeding child as well as for the mother; this seems to be the first time this perspective has been sought in research¹⁹⁶.

Health visitors were reported not to be supportive, saying “breastfeeding was replacing ‘proper food’” (Britton, 2000, p161); this reinforces the idea that breastfeeding is deemed appropriate only for infants in the early months. Morse and Harrison (1987) described how previous approbation for breastfeeding could turn to disapproval if it went on too long, creating “social coercion for weaning” (p205). Thus long-term breastfeeding seems to intensify and prolong a state of interdependence not really socially acceptable. Bengson (1999) supplies strategies to women for negotiating the obstacles through long-term breastfeeding, and also gives voice to many who have experienced it. Notably, Bengson is ostensibly presenting information on weaning off the breast – even where celebration of the long-term breastfeeding relationship finds voice, it is veiled in the respectability of intention to stop¹⁹⁷.

At each interview in phase two I asked women how long they thought they would breastfeed. Four actually stopped before six months. By the last interview, five had reached a point where breastfeeding was nominal and was supplemented by formula¹⁹⁸, while five were breastfeeding with the addition of solid foods. Two of the latter intended to continue breastfeeding until this child was two, as they had with the previous child. Tessa and Olivia, both second-time mothers who did not take their babies to be weighed very often, were the most committed to long-term breastfeeding and the most confident of being able to achieve this. Tessa described the difference she felt between herself and others because of this commitment:

[I have] confidence in breastfeeding and the commitment to breastfeeding...as a political issue so to speak....More than, ‘oh I’ll do it for as long as it happens’, and that’s it, it’s not part of my life. And that’s not how I see it. ...It’s a big difference between people. A bit like, if somebody you’re talking to suddenly makes a racist comment, just out of the blue, that sort of puts up a barrier...I feel you can only go so far with that person and whilst I would not wish to condemn bottlefeeders, really, it’s a thing I haven’t got in common (2:1).

It was as if her choices had taken her to a further level of identification with breastfeeding, and a sense of isolation and difference from others. However, she did have a clear intention to wean at two years, meaning that some women in the UK might continue breastfeeding one child twice as long as she had

¹⁹⁶ Biography is dotted with comments of those who have experienced this. It is interesting how absent the perspectives of the breastfed individual are in qualitative research.

¹⁹⁷ It seems clear to me that Bengson (1999) chooses this way of presenting her information because she feels women expect that they must wean, so she presents the case for continuing in a round-about fashion.

¹⁹⁸ Use of these categories is somewhat artificial as these women, and those in the next group, varied in how much they still breastfed.

(Britton, 2000). She also saw weaning as within her control, rather than surrendering completely to the process or conceding any decision-making to her child.

Mahon-Daly and Andrews (2002) describe the way “women’s emotional experiences of breastfeeding are captured for life” with some women experiencing a “transition to a new understanding of themselves and their bodies” (p65). This appears evident in Tessa’s words above. It is interesting that several qualitative researchers have used the metaphors of journeying to describe breastfeeding (Dykes & Williams, 1999; Hauck et al., 2002; Binns & Scott, 2002); and this is also used in a book for women (Smale, 1992). Its character as a life passage, or a major life event, are emphasised, in contrast to a portrayal of a feeding style choice with health benefits for the baby and some pleasant benefits of satisfaction and bonding for mother.

This life passage could be visualised as a literal passage, which has become, for western mothers, the choice of two parallel passages, with the option of opening one of two doors at the birth of the baby – one door being the choice to bottlefeed, the other to breastfeed¹⁹⁹. At the moment of choice, the mother steps over the threshold, into a liminal space of post-birth bodily recovery and adjustment to being a mother. If she chose the bottlefeeding door, the transit through the room beyond has many familiarities with her previous life. Choice of food requires choice of brands, purchase of utensils and implements, and the tasks of following instructions for measuring and sterilising. In this she can be helped by others, who may take over some of these tasks for her, either regularly or on occasion²⁰⁰.

Should she choose the breastfeeding door, she steps over the threshold into a different space. This is larger, perhaps less illuminated, so that she cannot see the far end. Along one side are a series of doors – these lead back into the bottlefeeding space²⁰¹ and she is able to step over those thresholds at any point (the fact that these doors open both ways and women may be able to change from bottlefeeding back to breastfeeding is unknown to most women). In this liminal breastfeeding space, a mother moves. The part near the postnatal door may be well-illuminated, although it is sure to contain surprises, however, the longer she remains here, the more she enters into shadowy nooks, less frequented, which may feel lonely. At some point, however, the journey is done and she steps out again, reincorporated²⁰².

¹⁹⁹ These two parallel passages would actually have a third one running in-between – a mixed feeding corridor. This would rarely be chosen at birth, but might be entered within hours.

²⁰⁰ However, this room is very poorly illuminated by research. Very few qualitative studies of the feeding experiences of women who choose to bottlefeed have been conducted; while many studies of postnatal issues have combined women’s experiences on all but direct feeding issues.

²⁰¹ Usually by passing through the mixed feeding corridor.

²⁰² An interesting study might be made of when women conceptualise themselves as stopping breastfeeding. When my daughter was three and a half, I asked her when she was going to stop and she told me that it would be on her fourth birthday and on that day she confirmed this. In fact, she had not had a suckle for some months – I stopped on New Year’s Day (I realised in retrospect).

The effect of traversing the breastfeeding passage is unpredictable, as Mahon-Daly and Andrews (2002) suggest. A notable feature of some of the in-depth qualitative work on the experiences of breastfeeding women is that for some it may be quite negative (Dykes & Williams, 1999; Schmied & Barclay, 1999; Hauck et al., 2002; Hauck & Irurita, 2003). This is echoed in published personal accounts (Brown & McPherson, 1998; Cusk, 2001; Shapiro, 2004). For many women the sensations of being out of bodily control and lacking the ability to master their time are disconcerting and unpleasant. This may be accentuated when a woman has little support. Women with postnatal depression – experiencing some of the bleakest parts of the path to motherhood – who had begun by breastfeeding testify about the baby’s “burdensome heaviness” (Wood et al., 1997, p310) and how the guilt they felt when their babies cried weighed them down like “chains around my neck” or “big, old lead coats” (p311). These weight metaphors were echoed by Val: “When I stopped feeding him myself, I just had this lift” (2:2).

Throughout this thesis, negative feelings of the women I interviewed have been noted. However, each of the women in phase two²⁰³ also mentioned positive feelings about breastfeeding. It may do more justice to the richness and density of issues involved in infant feeding to depict women as placed on a continuum in relation to particular aspects of breastfeeding rather than breastfeeding as a whole. For example, in phase two, Wendy found the first health visitor weighing of great importance, but thereafter did not seek opportunities to weigh her daughter. She valued breastfeeding and was pleased to exceed her expectations of how long she would continue, but she also arranged her life so as not to have to go out and breastfeed away from home. Simple categories do not do justice to the nuances of her experience.

Hospital midwives were found to suggest formula to protect mothers from tiredness or distress (Cloherty et al., 2003). As offering emotional support or modelling skills of settling the baby were time-consuming, a bottle for a tired mother’s baby was something the health worker could do quickly. Close examination of other times when bottles are suggested may reveal similar motivations. Formula is a purchased product which is substituted for time spent with a mother listening to her and helping her with physical aspects of feeding. It can also substitute for time mothers invest in learning and practicing these skills and feeding to the frequency of the baby’s requests. Formula functions rather as the apocryphal chocolates a businessman asks his secretary to buy for him to take to his wife to apologise for time spent away from her at work. Both the bottle and the chocolates are bought solutions to the tensions between time for human relationships and the need to conform to work and life patterns associated with the capitalist mode of production.

²⁰³ In phase one I sometimes only saw mothers once or twice and might catch them at a difficult moment.

Conclusion

Breastfeeding has been promoted as offering human babies nutrition which is tailor-made, while also allowing the immune system to mature during a phase in which the baby is physiologically an “extero-gestate foetus” (Jelliffe & Jelliffe, 1978, p4). Women have been exhorted to breastfeed due to this biological ‘naturalness’ and have had their own psychological fitness for motherhood judged by how they perform (Smale, 1998). At the same time women hear that breastfeeding hurts and is hard to do so that they feel they can only say they will “give it a go” (Bailey et al., 2004, p24). Although difficulty with breastfeeding is part of our cultural currency, women still remark that ‘nobody told me’ – indicating that the real ups and downs of the breastfeeding path are not discussed with honesty (Hoddinott & Pill, 1999b). In seeking to address this, perhaps it is important not just to remedy individual situations for breastfeeding women and babies, but to recognise this time as a major liminal life event which can be expected to contain a mix of experiences, and which is challenging in a number of ways.

The question of honesty about breastfeeding, is a thorny one for those who promote it and support breastfeeding women. An exchange of views between two advocates²⁰⁴ illustrated this. Hunter (1998) suggested supporters should validate women’s actual experiences rather than hold them to a particular standard of success, and suggested the term “good enough breastfeeding” (p485). Minchin (1999) asserted the absolute nature of the biological difference between breastfeeding and formula feeding, asserting that acceptance of a short but pleasant experience as the mark of success is to fall into the trap of superficial goals consistently promoted by industry. I find Minchin’s conviction that women should breastfeed even if they are very unhappy with it hard to warm to. However, I also do not feel able to simply endorse the limited goals many women bring into the breastfeeding relationship. This seems to involve reinforcing the understanding of breastfeeding as a brief lifestyle choice with a tangential relationship to the rest of life, and perpetuating current traumas for many more women. As long as women do not anticipate the realities of breastfeeding, particularly its ups and downs, it is likely that they will continue to have false expectations (Woods et al., 1997; Dykes & Williams, 1999; Hauck & Irurita, 2003).

The experience of being in a body which has just given birth involves having an unfamiliar shape and having to manage the flow of fluids (blood, lochia and milk). Breastfeeding prolongs this state, as breasts change and leak. The practice of breastfeeding requires negotiation of space, to manage the non-sexual use of body parts primarily thought of as sexual. Time management challenges and changes in daily activity which follow the birth of a baby are heightened and focussed solely on the

²⁰⁴ Each of these was both a health professional (Hunter a midwife; Minchin a lactation consultant) and also a trained volunteer breastfeeding supporter (with NCT; with NMAA, the Nursing Mothers of Australia Association); thus they are each highly committed personally and professionally to breastfeeding.

mother when breastfeeding is included. The total bodily and mental involvement in the experience of early breastfeeding provides an emotional journey into the unknown, which many western women perceive as uncharted and which leaves them feeling in ways they had not anticipated.

In this chapter I have suggested that framing the experience of breastfeeding for women in the UK as a liminal phase aids understanding of a number of findings of qualitative research. The personal transition to motherhood is complicated by a lack of cultural accommodation for the overwhelming embodied nature of breastfeeding and for its presentation of claims on women's time and attention which compete with those previously usual in her life. In navigating this transition, women seek reassurance; helping to explain the attraction of participating in weight monitoring. Few other collective social affirmations of the efficacy of motherhood are available in the contemporary UK and health care professionals lack skills in helping with breastfeeding and also do not focus on the experience, treating it as one method of milk delivery. Women therefore are not disposed to linger in the unfamiliar space of the 'totally breastfeeding' passage.

Chapter 12: 'FOLLOWING THE LINE':

DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

"Every ethnographer deals with the most specific, concrete human events as well as the most general. In our field notes we identify an infant with a specific name, held by a specific mother, nursing at that mother's breast, at a specific time and in a specific place. In those same field notes we will make observations about human love, nurturance and the universal relationship of mothers and children. In the final written ethnography, the range of levels is enormous" (Spradley, 1979, p206).

In this thesis, through analysis of the particular experiences of women in one clinic, I have sought to attend to the different levels mentioned by Spradley (1979). I explored my data for an understanding of the reasons for particular visits to the clinic and categorised these. I also observed the character and focus of interactions between women and health visitors and the place weight monitoring occupied in these. I examined understandings revealed in women's expectations that their babies would grow along a particular centile line and that some lines were more desirable than others: this was followed through in cataloguing actions women took when their babies' weights did not follow the line. I looked at the overall function of the weighing interaction as a ritual of early motherhood and used this to uncover the need for 'reassurance', and question whether this is the most potentially useful way of providing confidence. At the same time, using my data and the work of others, I characterise breastfeeding as a liminal experience, in which women are in transit through a limbo time. During the uncertainty of this passage, the ritual of weighing is one way that core values of our society are transmitted in the enculturation of new members of society and emphasised for their mothers. These values include a focus on production that can be measured and which is standardised. Our assumption is that continual growth and progress is desirable, as reflected in economic policy and personal expectations, and the achievement of which is based on perpetual scientific and technical discovery.

I have shown that these women felt they needed to 'follow the line' in several different ways, thus shaping their actions in feeding their babies and also their experience of breastfeeding. First, there was an expectation that the charted weights of babies would track along one particular centile. Alongside this was a desire to achieve routines for feeding and sleeping, in line with the advice and expectations of experts and family. Such routines have been socially constructed for adult convenience rather than mirroring infant physiological needs and require active imposition. The expectation for standardised growth and behaviour patterns shaped how these women approached breastfeeding. They appeared to simultaneously understand feeding as if it were an industrial process, and to seek to produce individuals suited for the routines desirable for workers in industrial and post-industrial capitalist modes of production (Campbell, 1984).

In this concluding chapter I will comment further on this understanding of feeding babies as a production-line process and the implications for breastfeeding. I also suggest practical suggestions for aspects of clinical weight monitoring practice, to ensure that it can more robustly support breastfeeding. I comment on the limitations of this study and make suggestions for some future work.

Breastfeeding: Product or Process?

Van Esterik (1989) suggested that cultures conceptualise infant feeding in “radically different ways” (p200). The bottlefeeding model is product oriented, while, at the other end of a continuum, the breastfeeding model emphasises cyclical renewability and relationality between mother and baby (Kahn, 1989; Dykes, 2004, 2005a). The data I collected suggests that many women considered themselves as mechanical milk producers first and asserted the value of relational aspects of feeding as an ‘extra’. This understanding attempts to shape breastfeeding in the product model and lends itself to the use of expressed milk or supplemental formula, in order to address perceived problems, such as baby weight which is of concern. The quality of interaction at the breast and during prolonged physical contact between mother and baby was something some mothers valued, but was not celebrated in the clinic nor placed centrally. Women prioritising this tended to avoid the clinic. Generally baby distress was interpreted as need for food, sleep or other measurable inputs, rather than for love. Weight and adherence to routine appeared the perfect ways to measure babies’ progress.

In chapter 2 I traced the historical background to current understandings of infant feeding. Western biomedical practice with birth and breastfeeding brought the approaches and ideology of industrial production into re-production (Mead, 1967; Rothman, 1982; van Esterik 1989; Martin, 1997; Dykes, 2004, 2005a). Enlightenment thinking, which conceptually separated the body from the mind or the soul, was forged during years of the developing capitalist industrial production. Importantly, this was built on centuries in which socially privileged women avoided maternal breastfeeding, and in which expert male opinion commented on infant feeding (Fildes, 1986, 1988; Dick, 1987; Palmer, 1993). While the production of goods was being regularised, people were increasingly socialised to function as workers. Even before production was moved into factories, which gather together multiple parts of the manufacturing process under the same roof, processes were broken up and stages outsourced to specialist workers, in their homes or small workshops. Agents of venture capitalists distributed materials or half finished goods and collected the product, in order to distribute for the next part of the process. As noted in chapter 5, the area in which this study took place was physically shaped in this era: weavers’ cottages and pack roads are still evident.

This proto-capitalist production involved whole families, with household activities and children's time meshed in with work²⁰⁵. The increasing place of schedules, clock time and externally-imposed rhythms in the lives of individuals took place over several centuries and now seems 'normal', so that the idea that infants should develop routines for the physiological process of feeding and sleeping may appear self-evident. The women of families gathered in towns for manufacturing were the first targets of health visitor activity. The physical product of their reproductive labour, most notably as soldiers in the South African wars of the late 19th century, was judged defective, and the provision of advice to the mother-workers to improve their product focussed on immediate issues of feeding and hygiene²⁰⁶. Clinics, with their use of scales and instruction about preparing supplemental milk, originated as places to focus on the production of healthy, regularised bodies. While always extolling breastfeeding, their very structure encouraged a focus on physical measurements of success rather than concerning themselves with the relationship between women and children.

Biomedicine investigated the physical body, examining physiological systems in ever-greater depth. Understanding of lactation focuses on objectified breasts. Many texts for professionals continue to include a diagram of the 'cut-away' breast – showing hormonal pathways but not the woman (e.g. Lawrence & Lawrence 1999). The emphasis is on "the disembodied product – breastmilk – and a disembodied labour-producer – the mother – who requires external regulation or labour-control" (Blum, 1999, p65).

Women were increasingly expected to carry out the recommendations of doctors in timing and duration of breastfeeds, and used their 'formulas'²⁰⁷ when turning to supplements (Fisher, 1982, 1985; Apple, 1987; Martin, 1987; Palmer, 1993; Wolf, 2001; Hausman, 2003; Dykes, 2004). Artificial feeding, with its scientifically derived mixtures, produced in a regularised manner from purchased ingredients, advertised and sold, and then used in the home in a manner suggested by experts and overseen by health visitors, fit with the life patterns of early and maturing capitalism (van Esterik, 1989). Through use of restrictive, timed, routine feeds, and regular weighing of infants, breastfeeding could be made to more nearly fit this model (Fisher, 1982; Apple, 1987; Palmer, 1993; Dykes, 2005a), although from the first many noticed that these led to the physical failure of lactation (Cran, 1913; Wickes, 1952). Some took this as a sign that women were unable to lactate successfully, and this understanding has become deeply embedded in women's consciousness.

²⁰⁵ Although it may have also encouraged methods of keeping babies under control, through swaddling, uses of opiates and, later, walking frames (Dick, 1987). I do not intend to suggest a golden era of childcare or family life at this or some other time!

²⁰⁶ Some women accepted this aim, and many lobbied for government support to improve the conditions in which they had to produce worker-citizens (Davies, 1978).

²⁰⁷ Doctors produced tables of ingredients with instructions as to how to vary the mixture according to the individual baby's age and needs, these were the original formulae which give modified cows' milk breast milk substitutes their current name (see Pritchard, 1904, p43 for example).

The biomedical observation that breastfed infants survived better than those hand-reared meant that a powerful approval of breastfeeding was voiced by medics and authoritative voices. However, social conditions which favoured establishing and sustaining breastfeeding, such as a time of protection from other duties during the lying-in, organisation of productive and household tasks together, at the partial discretion of women, and the understanding of the female body as productive rather than suspect and likely to fail, began to pass away. A new emphasis on marriage as a relationship of affection and companionship rather than economic partnership may have further curtailed time accorded to mother-infant exchanges during breastfeeding (Hausman, 2003), and created the responsibility women feel for ensuring that fathers bond with babies (Murphy, 1999). During the 20th century, women of all classes have also increasingly not only participated in waged work, but seen this as a source of personal affirmation and satisfaction. However, mothers face a choice of separating from their children, through curtailing, limiting or avoiding breastfeeding and engaging other care-givers, or leaving the mainstream of social life and engagement to stay with their children for substantial amounts of time. In fact, most women try an uneasy balance between these alternatives. A plethora of products have been designed to conceal, manage, extract and re-package their milk for their babies to aid in this endeavour.

A stark picture of the intertwining of the requirement of the global economy for consumption, as well as compliant workers is powerfully drawn in Huxley's (1994) dystopic "Brave New World"²⁰⁸. In this vision, babies are genetically engineered to do and enjoy the work required of them, gestated in artificial wombs, and reared in institutions. During leisure time people are expected to consume and to engage in promiscuous sex with no emotional ties. In the novel, the Director of 'Hatcheries and Conditioning' tells students:

"My love, my baby. No wonder those poor pre-moderns were mad and wicked and miserable. [...] With mothers and lovers [...] and feeling strongly [...] how could they be stable? [...] Stability [...] no civilization without social stability. [...] The machine turns, turns and must keep on turning for ever [...] Wheels must turn steadily, but cannot turn untended, There must be men to tend them, men as steady as the wheels upon their axles, sane men, obedient men, stable in contentment" (Huxley, 1994, p36-7).

The socialisation of individuals in order to service production with the discarding of 'irrelevant' human relationships is here taken to extremes. But in this fictional mirror we see breastfeeding (and much else) marginalised because it does not fit with the overarching goals of capitalist production and consumption, showing how breastfeeding as an experience or a relationship poorly fits with the values of economic growth and consumption.

A renewed appreciation of breastfeeding grew and took voice in the middle of the 20th century, from women themselves through organisations such as LLLI and NCT. These emphasised the naturalness

²⁰⁸ First published in 1932.

of breastfeeding and asserted the desire of women to breastfeed, suggesting that “breastfeeding [...] is a relational process where mother and baby respond to cues from one another” (Blum, 1999, p65). Several decades later, Dyball (1992) found the women she studied might experience this ‘natural’ ideal as another hegemonic standard against which their actual embodied and emotional experience could be found wanting. Hausman (2003) suggests that LLLI relies on biomedical research to support this position of natural motherliness, although actually challenging the misinformation given by individual health workers (see also Bobel, 2001). Asserting the validity of breastfeeding’s biomedical ‘benefits’ to bolster women’s right to breastfeed may result in validation of breast milk as a product rather than the relationality of the experience. Advocates struggle with tension between asserting a strong pro-breastfeeding voice and appealing realistically to women enculturated in our consumerist, capitalist, body-commodity society. Strong advocacy on behalf of breastfeeding can be dismissed as ‘policing’ women’s choices.

In the last half of the 20th century women have moved from the home to the workplace in greater numbers and the routines and time restrictions of productive work have been imposed directly on women, not just through the requirement to organise the worker partner and school-going children. Returning to waged work has led to an emphasis on feeding expressed breast milk, throwing the emphasis on conditions for producing the product (such as pumping breaks) rather than conditions for continuing the relationship (Galtry, 1997, 2000). As Greiner (2001) remarks:

“Since we did not know it was possible, let alone desirable, we have not created a society which provides women the support they need to practice [breastfeeding]. Thus the challenge is broad, far beyond that of educating health workers, however important that may be” (p1).

The government has made the bold recommendation that women should exclusively breastfeed for six months (DH, 2003b); a target fewer than one percent currently achieve (Kelly & Watt, 2005). Women are cajoled to try breastfeeding and receive praise and positive feedback for any efforts they make. This has meant that in popular discussion the differences between breastfeeding and formula have been minimised in order to avoid making women feel guilty (Minchin, 1999). Also, differences between exclusive and mixed breastfeeding are rarely mentioned. Breastfeeding is understood to confer fairly instant ‘benefits’, both in strengthened immunity and mother-baby bonding, with little appreciation of long-term effects. Breastfeeding’s relationship rewards have been reduced to quick-fix bonding and the transfer of antibodies appears to be conceived of as a one-off ‘download’. The effective socially-sanctioned position is for women to attempt breastfeeding, and, even when successful in establishing it physically, quickly turn to limiting its frequency, controlling where and when it occurs, delivering milk through bottles and other care-givers and maintaining close watch on ‘quality control’ through frequent weighing. To remain committed longer-term becomes deviant. Van Esterik stated that an appropriate goal is:

“[N]ot to have every woman breastfeed her infant, but to create conditions in individuals, households, communities, and nations so that every woman could” (1989, p211).

To enable this for women in the UK would require a substantial shift not merely in maternity services, but in all levels of social organisation. Currently, without such a shift, even at the level of child health clinics which focus on attained growth closely following a centile line, women are set up to fail.

Ironically, at the same time that breastfeeding is conceptualised as a mechanical process, the understanding of these mechanics is poor. Knowing the basics of how breastfeeding works allows women and babies to customise this to suit the individual pair (Renfrew et al., 2004). Neither health visitors or women in this study demonstrated thorough familiarity with these basics²⁰⁹. Practical suggestions to improve breastfeeding technique, including attention to positioning at the breast and attachment to the breast, were not commonly part of health visitor support. Interventions when weight gain caused concern were not informed by a protocol or research. Dykes (2004) described women in hospital postnatal wards as beginning breastfeeding on the production line, with midwives acting as “shop floor workers” (Kirkham, 1989, p132). The clinic continues the production line process with mothers as out-workers, and provides scrutiny by health visitors, who act as ‘quality controllers’. Their joint project is to mould raw-material babies into acceptable social citizens: growing in a standardised pattern, ready to eat and sleep at routine times, prepared to be left in childcare and suitably socialised for school, while their mothers return to work.

Ritual and Liminality

Using anthropological theory I explored weighing encounters as ritual occasions. In considering the deep hold of the weighing ritual on mothers in the UK, I used Davis-Floyd’s (1992) work in illuminating birth rituals to understand how repetitive patterning ensures transfer of values. This has led to an appreciation of how deeply internalised are the messages which individuals absorb and how they understand themselves as commodities in the capitalist economy, to be weighed and measured. In this study, even women who rarely weighed, and the one who rejected weighing, examined their experience in important ways with relation to the recorded weight. This pre-occupation does not appear to be present in all cultures, suggesting that weighing is culturally constructed, not a neutral biomedical measure of infant well-being (Abel, 1986; Tchibindat et al., 2004). Behague’s (1993) data from Brazil suggest women can adopt a preoccupation with weight monitoring and this will be coloured by other cultural understandings. International policy has focussed on better technical construction of the charts in the hope that the cultural meanings will fall into alignment to produce more ‘accurate’ assessments of infant well-being and the need to supplement breastfeeding. The

²⁰⁹ In the case of the health visitors, some of them did mention aspects from time to time. However, the striking absence was in any clear and consistent conveyance of this information to women either proactively or in response to questions about breastfeeding.

results of my study suggest that if international and UK policies aim to move emphasis away from weight alone, care will be needed to fulfil needs for reassurance and for rituals to mark the early months of babies' lives. Alternative means for women to attain confidence in their ability to nourish their babies also appear to require active development and support.

Having used theoretical understandings of ritual to illuminate weighing, I extended a related set of concepts from anthropology to deepen the theoretical understanding of breastfeeding as a liminal state and the project of women as negotiating through this unfamiliar bodily and social time. I related this concept, used by Mahon-Daly and Andrews (2002), to a wider body of qualitative findings about women's experience in the UK and other western cultural settings. I have affirmed its explanatory power in the data gathered in my own study, and propose this as a useful way to understand the magnitude of the challenges to improving both the biomedical indicators of breastfeeding, such as duration, exclusivity and initiation, and the lived experience of women. Currently many aspects of lived breastfeeding are dissonant with the norms of western physicality which assumes separation of bodies, control of bodily fluids and shaping the body through agency, including the use of devices. At the same time, the development of ways to describe breastfeeding in wider society which resonate with women's own experience may enable us to re-value its relational aspects.

I have suggested breastfeeding in the UK is 'even more liminal': this mirrors the cultural understanding that formula feeding is actually the norm and breastfeeding is measured in relation to this. Breastfeeding is understood as providing added health benefits (rather than formula-fed babies' health outcomes measured in relation to the norm of breastfed babies'); and continuing a dyadic, not-quite-separate embodied relationship after nine months of pregnancy and a few postnatal weeks of breastfeeding is felt to be 'prolonged'. In order to negotiate this liminal time, women seek guides: what is currently on offer appears to emphasise the importance of following the lines of the centile and prescriptive norms of scheduled feeding and sleeping. Unless the experience of breastfeeding as a period in which unpredictability and transition is expected, this extra liminality will continue to defeat women's efforts to traverse this time.

The use of a growth chart based on babies fed in a mix of ways, as well as the absence of techniques for improving breastfeeding effectiveness from the literature on addressing weight faltering are further aspects of the liminal, marginalised place of breastfeeding in our culture. Within the biomedical gaze on infant growth and well-being, the breast and the interactions at the breast have been air-brushed out. No research-based literature exists which sets out the case and practicalities for supplementation with formula, including suggested amounts and strategies for re-transitioning to the breast once or if weight gain has been re-established. However, this remains the intervention in practice.

In this liminal period, rituals provide support, and by considering weighing in this light, it becomes clear that simply reducing its incidence will leave needs unfulfilled. I have suggested that the messages this ritual conveys do not necessarily support breastfeeding, even where this is physically successful. I will consider below two possible proto-rituals which may be used alongside or replace weighing.

First I consider limitations of this study.

Limitations of this Study

I have already commented on some limitations of this study. For example, recruitment only after women have entered into health visitor care may have eliminated women with babies' whose weights were of concern at the first health visitor visit and who stopped breastfeeding in response. As I noted, one woman who had early difficulties with her baby's weight declined to take part. My method of recruiting women for phase two, through health visitors at their first home visit, meant that some of the women had babies quite a bit older than two weeks at the first interview, thus meaning the early weeks may be less well represented in the data.

I conducted observations in a single clinic, so it is likely that the particular may have over-played a role. For instance, women who attended a different clinic in the same authority reported that a nursery nurse weighed babies, while the health visitor discussed issues. This may complicate or change the ritual. In other areas, health visitors may have received more in-service training on breastfeeding, or have better referral networks to support breastfeeding. It is unclear how this might change findings. Different types of training on weight monitoring may exist. The training reported by health visitors in this study, focussed on accurate measurement and plotting and was not reported as addressing issues of interpretation further than the assumption that the earliest identification of a drop in weigh of two major centiles necessitated referral²¹⁰. This authority did not have a policy on supplementation.

During the study I was asked several times whether I would be contrasting the experience of white British women with that of ethnic minority women. Thomas and Avery (1998) demonstrated that the experience of infant feeding differs between white women and those of Pakistani, Indian and Bangladeshi origin. Extending this study to consider differences would be of interest, but both for pragmatic reasons, and to establish issues of interest in one group before attempting to contrast this

²¹⁰ I attended a session on weighing run by Tam Fry of the Child Growth Foundation offered at a primary care conference. The training in the authority was run by this organisation. In any case, only one of the four health visitors in the clinic had received this, as the other three were not then employed there.

with others, I did not do this. There are hints that different cultural traditions hold different understandings of weighing babies (Abel, 1986; Tchibindat et al., 2004)²¹¹.

The most serious limitation I became aware of is the relative focus in research on breastfeeding women and the paucity of data available on the lived experience of women who choose never to breastfeed or who quickly move to full formula feeding. It should not be assumed, for example, that formula-feeding women simply share the reasons the breastfeeding women in my study gave for weighing babies, with no specific categories of their own. In a curious way, because research is often conducted by those passionately interested in improving breastfeeding indicators or experience, this has the result of intensifying its liminality. Formula feeding implicitly remains the unremarked, and presumed unproblematic norm. Many issues which have been identified as difficult for breastfeeding women might also present difficulties for women involved in the day-to-day performance of any form of infant feeding in our deeply baby-hostile society. While bottlefeeding increases women's ability to 'fit' their babies into niches where they are less likely to be noticed, since they sleep longer, are more easily left with others and are less likely to draw attention to their mothers' nourishing bodies, it cannot simply be assumed that this is satisfying or unproblematic for those concerned. A rich field of potential investigation awaits!

Recommendations

This study is concerned with the experience of weighing for breastfeeding mothers, but, as I demonstrated in chapter 2, I examined the biomedical literature on weight monitoring in some depth. While identifying recommended practices for accuracy and frequency of weighing, as well as exploring literature on the physiology of lactation underlying good breastfeeding management practices, I saw the influence of their absence in practice. I therefore include recommendations for the practice of routine weight monitoring in the UK. Some echo those given in current general recommendations for community practice (Hall & Elliman 2003); however little specific consideration is given in these recommendations for practice which sustains breastfeeding.

Weight Monitoring Practice

- If weight is monitored, an accurate and a meaningful record should be sought. This implies attending to issues such as ensuring that scales are regularly checked and calibrated and standardised locally; and that babies are weighed naked and consistently at the same time of day and in the same relation to feeds. Internal audits of the accuracy of recording, and inter-practitioner weighing may be useful (Sachs et al., 2005, 2006).

²¹¹ Sarah also mentioned African women on her caseload and their attitudes.

- On each occasion a baby is weighed it should be clear why this is being done. Weighing as a means to enter into clinic and talk to the health visitor sends a powerful message about the primacy of this indicator. Clinics could be rearranged to include but not impose weighing. Re-focusing encounters onto the relational aspects and holistic infant development rather than maintaining a focus on what is measurable may help to make encounters more meaningful. When weights are conducted, the information should be discussed and genuinely seen as adding to the overall picture of infant health. Less frequent routine weighing may make individual episodes more meaningful if careful discussion also takes place.
- Initial training for health visitors should include formal standardised teaching on the construction of current growth charts, and the implications for interpretation. Updates may be required if new charts are introduced. The persistence of the myth that the current UK90 chart is largely based on formula-fed infants suggests a lack of familiarity with the construction of this everyday tool.
- Education for health visitors should include training in how to inform parents about plotted weights of their babies and discuss growth. Women in this study reported increasing understanding over time, but there may be value in a consistent message delivered early in the contact with health visitors. This area seems suitable for an action research project. Any educational intervention should be compiled using parental input and be evaluated in terms of their understanding.
- Information in the PCHR on weight monitoring does not clearly state that there is no 'added value' in routine weighing as frequently as weekly or fortnightly²¹². Including clear information could help to support health visitor's suggestions that weighing is not required at every clinic visit. Clear information should also be developed to indicate that growth along one centile is not necessarily expected, especially in the first six weeks, and that all centiles on the chart represent normal babies and extra investigation (and possible intervention) is indicated only when weight falls on the extreme centiles and where marked centile crossing has occurred.
- Future editions of 'Health for All Children' (Hall & Elliman, 2003) could incorporate more detail on the process of routine weighing, or indicate reliable sources of information for health visitors, and provide national guidance for all involved in child health surveillance.
- Consideration should be given using a chart based on data from breastfed babies for breastfed babies²¹³. There are limitations in the collection of the data for the UK 'Breast from Birth chart' so the forthcoming WHO chart should be strongly considered. Prior to adoption, the possible effects should be considered, perhaps through paper exercises of plotting the growth

²¹² Obviously if an individual baby is of concern, either due to previous weight gain patterns or other symptoms, this routine frequency does not apply.

²¹³ The issue of whether to use this for all babies is one that also requires consideration.

of babies from clinic records on this chart, or through pilots. The introduction of any new tool should be accompanied by education and audit.

- Protocols which suggest how to proceed in cases where weight falters should integrate breastfeeding assessment and the use of appropriate breastfeeding interventions. Breastfeeding efficacy should be one of the first areas of investigation where growth is of concern. All health visitors should receive education and updates in breastfeeding physiology and on strategies for teaching and supporting the principles of good breastfeeding technique.
- In the absence of research evidence to suggest when formula supplementation is needed for individual breastfed babies to bolster poor weight gain, protocols based on expert clinical opinion should be developed. These should include guidance for transitioning back to full breastfeeding when weight deficits are made up.

All of these suggestions should be implemented through national policies rather than through piecemeal adoption on a local basis. It will be important to use a multi-disciplinary approach: health visitors cannot change practices on their own. As well as professionals, volunteer breastfeeding support organisations may be influential in spreading a revised understanding of weight monitoring. All of these actions could be included in a national strategy on infant and young child feeding, in line with WHO (2002b) recommendations: indeed, changes which challenge long standing practices will probably need to be approached on a variety of levels and include all those with an interest in child health and well-being.

Rituals of Well Baby Care

If weighing is to be less frequent and also to be less of a focus for action and understanding, consideration should be given to the reasons women give for attending. The requirement for a ritual of reassurance – or a keepsake – cannot simply be removed. At least two possible alternative rituals appear to be currently available – ‘waiting in the wings’ – to assume these functions; simply downplaying weighing could push the burden onto them. Indeed, ritual appears to offer a satisfying way of shaping meaning for individuals; the harm done by current rituals of weighing may lie in its creation of the need for serial reassurance, and lack of efficacy in building confidence in the mother’s ability to care for, nourish and relate to her baby, particularly through breastfeeding. Respectful negotiation between women and infants, supported by health visitors, to attain what babies need, and what women in our culture want, might result in an easier atmosphere for both in the early months.

Alternative Ritual One: Developmental Progress

In the PCHR several pages are devoted to developmental milestones, “to help you remember some firsts” (CGF & RCPCH, 2004, p32). During data collection for the new growth chart, WHO compiled information on ages of attainment of similar milestones, and intend to issue this in some form. In focus groups in Congo-Brazzaville, mothers found developmental milestones and acquisition of social skills more compelling measures of baby progress than weight (Tchibindat et al., 2004). Intriguingly, a mothercraft manual from the mid-twentieth century included a growth chart combining a weight curve with normative ages for such milestones (Liddiard, 1946). A Lancet (1957) editorial briefly describes one clinician’s experience of introducing clinic sessions without weighing, although I found no further follow-up on this approach. Congolese women come from a markedly different culture, and western mothers may find such milestones less compelling. The fact that there have been earlier attempts to downplay weight monitoring and insert milestones should warn us that there may be limitations or problems with this, and these should not be adopted as alternatives in an effort to take the focus off weighing without careful consideration and exploration. Crucially, the use of these appears to have the potential to become as mechanical and meaningless as frequent weight monitoring, to engender similar anxieties, to insert itself between the relationality of mother and baby and substitute for a holistic understanding of the child and of breastfeeding.

Alternative Ritual Two: Positioning and Attachment at the Breast.

Throughout this thesis I have mentioned the use of skilled assessment of positioning of the baby at the breast and attachment of the baby to the breast. I have argued that using this would allow health visitors to offer suggestions of ‘fine-tuning’ the physical skills of breastfeeding and possibly improve weight gain, and also ameliorate other baby behaviours, such as ‘colic’, sleeplessness and very frequent feeds²¹⁴. However, I have also shown within this study that there was some use of the language of such assessment and the assertion that health visitors would do this if needed. Zoë spoke of having positioning checked at the hospital, but did not receive other teaching (in her case about the frequency of feeding) which led to her baby losing a great deal of weight initially. Other women reported that they had received attention to positioning, but did not mention the kind of detail that I would understand indicated a skilled approach on the part of professionals. My own observations, particularly in the breastfeeding support group, indicated that there were gross positioning issues. If these had been addressed, it is possible that attachment and reported pain, frequent feeding and slow growth might have improved. Introducing a checklist to tick off in order to ensure that positioning and attachment has been ‘done’ (see for example, Fisher & Inch, 1999) would not substitute for training health visitors to have a thorough understanding of the underlying physiology of

²¹⁴ Although a need for frequent contact and feeding is normal. However very unsettled behaviour and prolonged frequent feeding may also indicate the possibility that feeding is less than fully effective.

breastfeeding and the practical skills of ensuring it is effective (and pain-free) for individual mother-baby pairs (Woolridge, 1995b; Renfrew et al., 2000; Renfrew et al., 2005).

There also appears potential for such observation to become a superficial ritual practice. If it is done without technical accuracy, as with weighing, this could produce reassurance based on false premises. Breastfeeding technique could be 'absolved' of responsibility for causing problems, throwing women back on the understanding that their personal production system is faulty and that they need to rely on formula. At the same time, the reduction of the relationality of breastfeeding to the insertion of body part 'a' into body orifice 'b' could reinforce mechanical disembodied understandings of feeding.

In suggesting that these two areas are available for alternative ritual practice and then producing ways in which they could simply reinforce the current situation of poor professional support for breastfeeding, I do not suggest that ritual in and of itself is undesirable. Douglas (1984) argues that ritual is important for all peoples. The challenge is to combine ritual which satisfies the need for reassurance while also providing accurate information that does not unnecessarily undermine effective breastfeeding. Combining the introduction of a planned assessment tool with attention to its potential ritual and emotional aspects is unusual in health services research. In seeking to affect breastfeeding practice, both in terms of uptake, duration and exclusivity, as well as in its satisfaction for women and for babies, attention to physical, biological, social and emotional effects will be required.

Future Studies

I have suggested that any changes in weighing practice should be evaluated as they are introduced. I suggest that the inclusion of the chart in the parent-held record may have led to the intense focus on following the centile and narrowed the conception of acceptable infant weight gain. It therefore seems wise to be alert to unintended consequences of change. Future biomedical studies are needed to demonstrate that altering positioning and attachment indeed impacts on future weight gain. Careful consideration of the inclusion of individual components of any checklist of indicators of effective breastfeeding is essential. Assuming that effect is shown, then careful consideration of methods of teaching health care staff the necessary skills, well-grounded in a clear understanding of lactation physiology, will be needed.

Ethnography, particularly the use of participant observation, as a method of studying a complex bio-social practice such as breastfeeding has difficulties in implementation, but also offers possibilities of rich, deep understandings of behaviour and understanding. More small studies may be conducted by students, but the inclusion of this method in funding by the government should be encouraged. For over 20 years the rates of initiation and duration have remained static, while the practice of exclusive breastfeeding appears to be both rare and rarely understood. To attain the biomedical 'benefits' of

breastfeeding for babies and women, new approaches in both research and in service delivery are needed. At the same time, inclusion of social science approaches may encourage social interventions. The yearly DH campaign during 'Breastfeeding Awareness Week' has implicitly acknowledged the need to address wider understandings of breastfeeding. If my analysis of breastfeeding as having become a socially marginalised, liminal practice is accepted, it is questionable whether a few posters and pens for one week a year can effect change.

A large study, conducted in Sweden, followed 506 breastfeeding women, with fortnightly recordings of the baby's feeding pattern, and visits from researchers who weighed the baby (Hörnell et al., 1999; Hörnell, 2000; Aarts et al., 2003). Combining this kind of textured, intensive, quantitative investigation of feeding patterns and baby weights with qualitative interviews and ethnographic observations could offer the chance of a well-rounded, in-depth picture of the complexity of how women make infant feeding decisions and implement them. Currently research on breastfeeding is conducted in studies using either a qualitative or quantitative approach. This division may inhibit better understanding of the complexity of the bio-psychosocial practice of breastfeeding.

Most previous research on qualitative issues has been conducted either by those currently or previously working within the health services, or by social science researchers with personal but no clinical experience of the physical aspects of breastfeeding. I suggest that all researchers need to bring an understanding of all aspects of breastfeeding as a bio-psychosocial practice, and that researchers from all backgrounds need to attempt to engage with all these facets of breastfeeding. At the same time, research should be encouraged from every perspective. As a researcher without a background as a health worker, but with extensive experience in working with women on all aspects of breastfeeding, including the most medical, I have brought a different 'way of seeing' to my study. In particular, seeing what was not there, and documenting the absence of understanding of breastfeeding physiology has been key to the development of my arguments.

If the project of developing alternative rituals to carry women through liminality is taken up, it may be that these could focus on the act of breastfeeding itself. Ethnographic observation of what women actually do during breastfeeding (and bottlefeeding) is scant. Perhaps this offers an area both for future observation and for creating rituals based on technically effective practice incorporating rich meanings for breastfeeding. Currently in our culture, women find their lonely ways to practices of feeding.

Honesty about Babies and Breastfeeding

In observing women negotiating through the liminal, unknown state of breastfeeding, the vexed question of what is known by whom and how to widen this was ever present. Sitting in the clinic I

felt the weight of my years of voluntary work supporting breastfeeding. I had learned – from research and from generations of women who had observed breastfeeding – ways of assessing positioning and attachment in order to improve the effectiveness of breastfeeding and ensure it was pain free. Although women contacting me as a breastfeeding supporter might not be aware that there were such interventions, in the clinic, the lack of awareness extended deeper as almost no one exhibited understanding that there are volunteers who have knowledge of breastfeeding, resting both on research and accumulated knowledge. Feeling that I had lost my identity as a breastfeeding supporter and adopted the new role of researcher, becoming myself a person in liminal transition, I experienced a dissonance between what I thought I knew and what was ‘known’ in the clinic. This extended to understandings of baby behaviour. Women had strong expectations of babies who slept and woke, exhibiting unambiguous signals for feeding, fed to satiety and then were content, ideally sleeping²¹⁵. I would now assert that this is not biologically normal behaviour. Indeed, in breastfeeding, Woolridge (1995b) has gone so far as to suggest that some of such behaviour would result from previous mishandling at the breast. Stadlen (2004), in talking to mothers, and Gerhardt (2004), in considering the physio-social needs of infant development have come to similar conclusions about the time-consuming nature of infant care in the early months, and the overwhelming nature of the change in daily life for new mothers. This does not fit in with our social structures or the imperatives of a work-based culture and is unexpected to women.

Conclusion

Health visitors have suggested that weighing is the carrot to get women to attend clinics regularly. In observing the partnership with its close focus on attaining convenient norms of baby behaviour rather than supporting the relationship between mother and baby, it appeared that both health visitors and women are tied into a system of mechanising infant behaviour in obedience to norms of the clock and scale so that babies are ready to be obedient consumers of baby products and foods and socialised to join in state education by the age of three, to emerge with qualifications tailored to the requirements of the UK economy some decades later. I have characterised this as ‘following the line’. These underlying values may need to be questioned in order to achieve improvement in rates of breastfeeding uptake, duration or intensity (Gerhardt, 2004).

Weighing babies can provide information of importance in evaluating their physical health and the efficacy of breastfeeding. However, it can mask other ways of investigating these same issues, and has become privileged in our understanding. Current weighing practice appears to reinforce the conditions in which breastfeeding is understood only in terms of milk transfer and in which both health visitors and mothers feel their agency is constricted and restricted by reference to an implacable

²¹⁵ Of course I remember my own such expectations when I had my first baby!

line – for weight and for baby behaviour. Can we break free? Can we use weighing without abusing it?

The measure of baby well-being appears to have been reduced to a recorded weight gain trajectory which follows a centile on the chart, with the fiftieth centile seen as the most desirable. Women appear to value the reassurance of seeing the plotted weight and to be prepared to sacrifice breastfeeding in order to maintain the line. Alternative rituals to provide reassurance or to move to confidence in the new, unfamiliar relationship with a dependent other will be needed. New ways of sustaining women during their passage through liminality may be able to support breastfeeding if these are sensitively developed. They must account for the physical well-being of babies as well as their affective development and for the practical as well as emotional support of women. Women deserve support and accurate informative guidance through the liminal space of breastfeeding and new motherhood. Currently, they may be left feeling that their task is to ensure that their baby conforms, both in following the line of the centiles, and in quickly adopting feeding and sleeping routines convenient to our social requirements. So far, tinkering with the current systems and social understandings of breastfeeding appears to have brought little advance either for satisfaction or for performance indicators. It is time to attend to the deeper meanings of our practice and to embody our support for breastfeeding centrally within well-baby services and in our wider society.

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APPENDICES

APPENDIX 1: INFORMATION AND CONSENT FORMS

Information and consent form for women at the clinic

Study on weighing breastfed babies

My name is **Magda Sachs**.

I plan to carry out a study which involves watching babies being weighed at the baby health clinic, and listening to the health visitor and the mother talking about breastfeeding. I am interested in finding out about how weighing the baby influences how mothers feel about feeding their baby.

This will involve observing you and the health visitor as the baby is checked and weighed and as you discuss feeding.

I may then ask you for further information about the time you spent with the health visitor. I am interested in what was helpful about it or if anything was less helpful. I would like to use a tape recorder, as this makes it easier for me to record what was said. If you would prefer me not to use a tape recorder, please say so and I will just take notes instead.

You may refuse to take part in the study completely. If you are happy to get involved at the start, then you can withdraw at any time. You can refuse to answer any question at any time. Refusal to participate will not affect the care that you receive in any way.

I will not reveal your name and personal details to anyone. All information and interview reports will be filed under a number and not your name. I will erase the tapes as soon as I have typed up all the information on them. No one else other than myself and possibly my research supervisor will be allowed to listen to them. Small parts of the interviews may be included in my final write up and in any article I write, but of course no names will be included.

I am a student studying for an MPhil / PhD degree. I am studying for my degree at the University of Central Lancashire in Preston, under the supervision of Dr Bernadette Carter and Fiona Dykes. I am also a volunteer Breastfeeding Supporter for the charity The Breastfeeding Network. However, as a researcher, I will not be able to offer breastfeeding support. I will be in the clinic as an observer and listener. My study findings will be presented to conferences and in journals.

My university contact address is listed above. My home phone number is 01457 820083.

If you are still happy to take part, having read this information, please sign and date this form to show that you understand the contents (you will have a copy to keep).

Signature _____ Date _____

Witnessed _____ Date _____

Researcher _____ Date _____

Thank you.

Magda Sachs
Research Student
01457 820083

Information and consent form for health visitors at XXXX clinic

Study on weighing breastfed babies

My name is **Magda Sachs**. I am a research student at the University of Central Lancashire, studying for an MPhil / PhD degree, under the supervision of Dr Bernadette Carter, Principal Lecturer in Nursing and Fiona Dykes, Lecturer in Midwifery Studies.

I plan to carry out a study which involves watching babies being weighed at the baby health clinic, and listening to the health visitor and the mother talking about breastfeeding. I am interested in finding out about how weighing the baby influences how mothers feel about feeding their baby.

This will involve observing you and the mother as the baby is checked and weighed and as you discuss feeding.

I may then ask you for further information about the time you spent with the woman, for clarification related to what I have observed. I would like to use a tape recorder, as this makes it easier for me to record what was said. If you would prefer me not to use a tape recorder, please say so and I will just take notes instead.

If you are happy to get involved in the study at the start (as discussed before your manager consented), then you can withdraw at any time. You may refuse to answer any question at any time.

I will not reveal your name and personal details to anyone. All information and interview reports will be filed under a number and not your name. I will erase the tapes as soon as I have typed up all the information on them. No one else other than myself and possibly my research supervisor will be allowed to listen to them. Small parts of the interviews may be included in my final write up and in any article I write, but of course no names will be included.

As well as being a research student, I am also a volunteer Breastfeeding Supporter for the charity The Breastfeeding Network. However, as a researcher, I will not be able to offer breastfeeding support. I will be in the clinic as an observer and listener

If you are still happy to take part, having read this information, please sign and date this form (you will have a copy to keep).

Signature _____ Date _____

Witnessed _____ Date _____

Researcher _____ Date _____

Thank you.

Magda Sachs
Research Student
01457 820083

**Information and consent form for breastfeeding mothers
interviewed at home**

Study on weighing breastfed babies

My name is Magda Sachs.

I plan to carry out a study which involves talking to women about having their baby weighed at the clinic. I am interested in finding out about how weighing the baby influences how mothers feel about feeding their baby.

This will involve talking you up several times. I hope to come to your house, if that is ok with you, to talk to you. I am interested in what was helpful about your recent visits to the clinic or if anything was less helpful. I would like to use a tape recorder, as this makes it easier for me to record what was said. If you would prefer me not to use a tape recorder, please say so and I will just take notes instead.

I would plan to visit you up to three times. The visits would be about 6 to 8 weeks apart. I would telephone you once in-between visits to arrange the next visit and make sure you are still willing for me to visit.

You may refuse to take part in the study completely. If you are happy to get involved at the start, then you can withdraw at any time. You can refuse to answer any question at any time. Refusal to participate will not affect the care that you receive in any way.

I will not reveal your name and personal details to anyone. All information and interview reports will be filed under a number and not your name. I will erase the tapes as soon as I have typed up all the information on them. No one else other than myself and possibly my research supervisor will be allowed to listen to them. Small parts of the interviews may be included in my final write up and in any article I write, but of course no names will be included.

I am a student studying for an MPhil / PhD degree. I am studying for my degree at the University of Central Lancashire in Preston, under the supervision of Dr Bernadette Carter and Fiona Dykes. I am also a volunteer Breastfeeding Supporter for the charity The Breastfeeding Network. However, as a researcher, I will not be able to offer breastfeeding support. I will be talking and listening to you. My study findings will be presented to conferences and in journals.

My university contact address is listed above. My home phone number is 01457 820083.

If you are still happy to take part, having read this information, please sign and date this form to show that you understand the contents (you will have a copy to keep).

Signature _____ Date _____

Witnessed _____ Date _____

Researcher _____ Date _____

Thank you.

Magda Sachs
Research Student
01457 820083

APPENDIX 3:

QUESTIONS FOR PHASE TWO

Questions for the first interview:

How are things going? What is the baby called? How old is (baby name) now?

Thinking back to the first visit from the HV... When was that?

What happened at that visit?

Did she weigh the baby?

How did you feel about that?

Why was that?

Have you been to the clinic yet? [later: thinking back to the last visit to the clinic...]

If yes:

When was that?

What happened?

How did you feel?

What do you hope to get out of going to the clinic?

Do you look forward to it or not?

When the health visitor weighs (baby name)

What are you thinking?

What are you hoping for? Why?

The health visitor writes down the weight and she also puts it on the chart. Do you find one of these more helpful in understanding how (baby name) is doing?

After (baby name) was weighed did you change anything about how you fed him?

What?

Why? Was it something you decided, or did the health visitor or someone else suggest that?

What happened after you changed things?

How often is (baby name) weighed?

How did you decide that was a good time to take (baby name) to be weighed?

If second baby: – is this different than what you did with your first baby? Why is that?

How is breastfeeding going for the two of you?

As well as breastfeeding (baby name) are you giving anything else? Like, formula, water, infacol, etc.

Why did you decide to give (baby name) that?

Are you expressing your own milk?

Have you been giving it to (baby name)?

When are you giving it? (eg regular basis, when go out)

How are you finding that breastfeeding is fitting with the other things you want or need to do?

Have you asked the health visitors for any help or information on breastfeeding?

How was that?

How did you feel about what they suggested?

Did you follow any of the advice they gave you?

Was it helpful?

How do you feel about needing advice about breastfeeding?
 Do you feel that the health visitor(s) has supported you in your choices about feeding?
 Have you had help or information about breastfeeding from anyone else?
 Who?
 How was that?
 Have you had any questions about breastfeeding or problems that you haven't been able to find someone to help with?
 Has anyone else in your family or any of your friends breastfed ?
 Have people in the family/friends said anything about breastfeeding?
 How do you feel about that?
 Have they talked about the baby's weight?
 How has that made you feel?
 Have they been interested in seeing the weight chart in the red book?
 Have you been to the breastfeeding support group?
 If yes: Why did you go?
 How did you feel about the group?
 Did you weigh your baby there? If yes, how was that compared to clinic?
 If no: any reason why not?
 Have you thought about how long you might continue breastfeeding?
 Would you say that breastfeeding is important to you?
 Would you say it is important to the baby?
 Is there anything else about the experience of breastfeeding and weighing that I haven't asked that you think is important or interesting?

Questions for the second and third interview

How are things going? How old is (baby name) now?
 Thinking about going to the baby clinic...
 When did you last go?
 What happened?
 How did you feel?
 What do you hope to get out of going to the clinic?
 Do you look forward to it or not?
 When the health visitor weighs (baby name)
 What are you thinking?
 What are you hoping for? Why?
 At the clinic the health visitor writes down the weight and she also puts it on the chart. Do you find one of these more helpful in understanding how (baby name) is doing?
 After (baby name) was weighed did you change anything about how you fed him?
 What?
 Why? Was it something you decided, or did the health visitor or someone else suggest that?
 What happened after you changed things?
 How often is (baby name) weighed?
 How did you decide that was a good time to take (baby name) to be weighed?

Thinking back over the time you have been going to the clinic, have things been the same or was it different before? How?

How is breastfeeding going for the two of you?

As well as breastfeeding (baby name) are you giving anything else? Like, formula, water, infacol, etc.

Why did you decide to give (baby name) that?

Are you expressing your own milk?

Have you been giving it to (baby name)?

When are you giving it? (eg regular basis, when go out)

When did you start?

Are you giving (baby name) solid foods?

When did you start?

Why did you decide to start?

How are you finding that breastfeeding is fitting with the other things you want or need to do?

Have you asked the health visitors for any help or information on breastfeeding?

How was that?

How did you feel about what they suggested?

Did you follow any of the advice they gave you?

Was it helpful?

How do you feel about needing advice about breastfeeding?

Have you had help or information about breastfeeding from anyone else?

Who?

How was that?

Has anyone else in your family or any of your friends breastfed their babies?

Have people in the family/friends said anything about breastfeeding?

How do you feel about that?

Have they talked about the baby's weight?

How has that made you feel?

Have they been interested in seeing the weight chart in the red book?

Have you been to the breastfeeding support group?

If yes: Why did you go?

How did you feel about the group?

Did you weigh your baby there? If yes, how was that compared to clinic?

If no: any reason why not?

Would you say that breastfeeding is important to you?

Is there anything else about the experience of breastfeeding and weighing that I haven't asked that you think is important or interesting?

APPENDIX 4:

Copies of the following are appended:

Sachs M, Dykes F, & Carter B (2005a). Weight monitoring of breastfed babies in the UK – centile charts, scales and weighing frequency. *Maternal and Child Nutrition* 1, 63-76.

Sachs M, Dykes F, & Carter B (2006) Weight monitoring of breastfed babies in the UK – interpreting, explaining and intervening. *Maternal and Child Nutrition* 2,

Weight monitoring of breastfed babies in the UK – centile charts, scales and weighing frequency

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Abstract

Weighing infants during their first 6 months is an important focus of growth monitoring and a common activity of child health care services worldwide. In these same months, health workers provide support for breastfeeding and promote continued exclusive breastfeeding. The literature on the practice of weighing breastfed babies is reviewed, as it applies to the United Kingdom. The shape of the growth curves for breastfed babies differs from that of formula-fed infants and also from centile charts previously in use. The World Health Organization commitment to the production of a new growth reference has generated discussion of the implications of charts in use. The country-specific charts in use in the UK are examined and the data used to construct them discussed with reference to clinical use for breastfed infants. Recent UK discussions on charts, as well as on the frequency of routine weighing for babies in the community are considered, and the available evidence on the accuracy of weighing in practice is noted. The choices made in constructing different charts; the physical condition of scales and their use in practice have implications for plotted growth. This paper aims to present a wide range of evidence available in this area in order to encourage debate on practice. A companion paper will discuss issues of interpretation, conveying information to parents, and interventions.

Keywords: breastfeeding, breastfeeding style, growth monitoring, growth charts, weighing infants.

Introduction

Promoting and supporting breastfeeding is a public health goal in the United Kingdom. Monitoring

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babies' weight gain by regular weighing and charting provides a focus for interactions between mothers and health care providers. The desirable frequency of routine weighing has been investigated and useful practice recommendations issued. Some aspects of weighing practice, such as the difference in shape of growth curves between breast- and non-breastfed

infants have received attention internationally, while a number of studies have been conducted on accuracy of scales. However, a wide-ranging consideration of the areas which affect routine growth monitoring of breastfed babies has not been undertaken. This review, and its companion (Sachs *et al.*, 2005), aim to do this with specific reference to practice in the UK.

Aims and methods of the review

A Cochrane Collaboration review sought evidence of benefits and harms of growth monitoring (Panpanich & Garner, 2003). Under the systematic review criteria of the Collaboration, only two papers were included. As White (2001) argues, reviews with restrictive inclusion criteria risk excluding evidence of value to the topic in consideration. This current review surveys a wide range of the literatures relevant to the practice of routine weighing of breastfed babies. Literature was gathered during the course of the doctoral studies of the first author. Many issues were identified as impacting on current understanding and practice. The literature included is disparate: population intervention studies, observational data, commentaries from clinicians and others, audit results, small-scale studies of an aspect of interest, reviews of research, and recommendations for practice. Ideally, original research evidence would be available for all aspects of interest, and for the way weight monitoring is conducted: in the absence of a consistent level of such evidence, this review is inclusive rather than prescriptive and seeks to investigate widely. Set inclusion and exclusion criteria were not established prior to the search. Much literature on growth monitoring has a global scope or pertains to other country contexts; this has been selectively included where it helps to illuminate questions relevant to the UK. A major conclusion of this review is that the potential literature is vast and covers many disciplines. This results in a review which does not provide answers to discrete questions, but rather attempts to map a wide canvas, and delineate areas in which further detailed research, audit, review and reflection are needed.

Databases searched: Medline, CINAHL, Cochrane, British Nursing Index, MIDIRS. Many references from identified papers were followed

up. Search terms: growth monitoring; growth chart; baby weight; infant weight; breastfeeding; scales.

What is known about weighing breastfed babies in the UK?

Monitoring babies' weight is a long-established UK practice; many mothers attend frequently and value the activity.

However, there are anecdotal concerns that frequent weighing may undermine breastfeeding confidence and duration.

Frequency recommendations have been made for routine weighing in the UK, but many babies are weighed much more often.

The shape of the centiles on charts constructed from breastfed baby data is different from that of conventional charts, including the UK90 chart.

A UK 'Breast from Birth' chart is available and was devised from a subset of the data used for the UK90 chart.

Practices which affect weighing accuracy have been examined in a number of small studies.

Growth monitoring/weight monitoring

Literature referring to 'growth monitoring' may at times discuss weight, length/height, head circumference, or a combination of all or some of these. In order to minimize confusion, this review will use the term 'weight monitoring' to mean the regular measurement of weight. It will further restrict its focus to infants in the first 6 months in the UK.

A 2002 survey by the World Health Organization (WHO) found that regular weighing is part of most Western well-baby care systems and 'growth charts are used universally in pediatric care', with all countries who replied to the survey using weight-for-age, and over half using this alone to assess infant and child growth (de Onis *et al.*, 2004, p. 461). Growth monitoring used at population level has been credited with amelioration of severe malnutrition in developing country contexts (Shrimpton, 2003), although it is acknowledged that the effect is not straight-forward (Shrimpton *et al.*, 2001). The success of growth monitoring has been questioned and the impetus for monitoring ascribed to the desires of international aid agencies (Gerein, 1988; Nabarro & Chinnock, 1988). In response to such critiques, UNICEF reviewed and refocused its commitment to growth monitoring in the early 1990s (Pearson, 1995), although acknowledging that while 'growth monitoring and breastfeeding are potentially complementary activities too often

opportunities are missed' (Greaves & Hendrata, 1990, p. 121).

Panpanich & Garner (2003) define growth [weight¹] monitoring of individual children as involving regular weighing, with weights charted, and interventions by health workers in concert with mothers where growth is of concern, and tracking of outcomes. The benefits of monitoring in the UK, within a national programme of health surveillance, are given as the detection of chronic disorders, health promotion, the gathering of information on public health trends, and because it is valued by parents (Elliman *et al.*, 2002; Hall & Elliman, 2003, pp. 170–176).

In the UK, babies are weighed regularly and their growth is plotted on charts contained in a parent-held child health record (PCHR). Every new mother is allocated a health visitor (a nurse with additional training, who weighs and measures babies at home and in child health clinics, discusses aspects of infant feeding and care, and delivers developmental checks).

Breastfeeding

Public health policy in the UK currently recommends that all babies be breastfed exclusively for 6 months; acknowledging 'proven health benefits to breastfeeding for both child and mother in the short and long-term' (Department of Health, 2003, p. 1), following the recommendation of the WHO (2002). Currently 69% of new mothers in the UK ever breastfeed, and 28% of all babies receive any breast milk at the age of 4 months (Hamlyn *et al.*, 2002).

Some small qualitative studies have suggested that a focus on weighing might have an undermining effect on women's confidence in their ability to nourish their babies (Dykes & Williams, 1999), or lead health professionals to suggest supplementation in response to small deviations from a centile line (Mahon-Daly & Andrews, 2002). Marchand & Morrow (1994) found quantifiable measures of breastfeeding success were the ones reinforced in encounters between women and health professionals.

¹The review uses the term 'growth monitoring', but the trials identified are on weight monitoring.

Alternatively, the reassurance of regular weight gain is suggested to be likely to encourage women to continue breastfeeding (Hall & Elliman, 2003).

Birthweight loss and regain

There has been debate over early neonatal weight loss and birthweight regain in breastfed babies (Oddie *et al.*, 2001). A recent overview examined research relevant to the UK (Sachs & Oddie, 2002). Midwives care for mothers and babies during the first 10–14 days after birth, care is then handed over to health visitors. The regain of any lost birthweight is an important first indicator that breastfeeding is effective and the baby is healthy, and should be considered before handing over of care. It should be noted that the growth charts available in the UK show smooth curves rising from the birthweight. Early weight loss, which is expected and considered physiological (Lawrence & Lawrence, 1999), is not reflected in the centile curves depicted on the UK (or other) growth charts, with implications for the interpretation of weight in the first postnatal weeks (Wright & Parkinson, 2004).

Weight monitoring

To ensure that weight monitoring in the UK provides useful information and supports infant well being, a range of elements need to be of a robust standard. These include:

- the tools used: centile growth charts, scales;
- how these tools are used, e.g. the frequency of weighing, the accuracy of weighing and charting;
- the interpretation of the meaning of charted weight trajectories by health professionals;
- the communication of the meaning of fluctuations shown on the chart from health professional to parent; and
- the type of interventions considered and implemented when there is concern.

This paper addresses the first two of these in the context of UK practice particularly as they relate to breastfed babies, with the other issues covered in a companion paper (Sachs *et al.*, 2005).

Monitoring tools

Growth charts – international perspective

Weight charts have been available for over a century (Brosco, 2001). The WHO adopted the US National Center for Health Statistics (NCHS) growth reference charts for international use, to aid in combating malnutrition (Hamill *et al.*, 1979; Garza *et al.*, 1994; Pearson, 1995). Data collected in Ohio, USA in 1929, where most infants had been formula-fed, and given early complementary foods ('solids') was used for the first year of the 1977 NCHS chart. Studies conducted in the 1980s on the growth of breastfed children showed a consistent mismatch between the shape of growth trajectories of healthy breastfed infants, in various settings, and the shape of the centiles on this chart. This difference, in which breastfed babies' weight rises more steeply than the reference curve in the early days, and then appears to gently 'falter' or dip below the chart centiles, was accepted to be 'physiologically determined' (Garza *et al.*, 1994, p. 6).

Use of the NCHS chart raised world-wide concerns that the 'the negative deviations [between the growth trajectory of breastfed babies and the curve of the chart centile] are large enough to lead health workers to make faulty decisions regarding the adequate growth of breastfed infants and thus to mistakenly advise mothers to supplement unnecessarily or to stop breastfeeding altogether' (de Onis *et al.*, 1997, p. e8). In response, a WHO Growth Study group proposed to collect prospective longitudinal data from seven countries, selecting babies from relatively advantaged families, with no socio-economic or environmental constraints on growth (Garza & de Onis, 1999; also WHO Working Group on the Growth Reference Protocol, 2000) and who were fed in accordance with (the then) WHO recommendations, including being exclusively breastfed for at least 4 months. Women whose babies were included were offered extra support for breastfeeding (de Onis & Victora, 2004). This chart is currently estimated to be available in 2005, and the next step envisaged is to develop guidelines to aid in interpretation for clinical use (WHO Working Group on Infant Growth, 1995; de Onis *et al.*, 1997; de Onis & Victora, 2004).

When collecting data, either a whole population is chosen, creating a growth 'reference', or infants are selected in order to create a 'standard', which shows optimal growth (Garza *et al.*, 1994; Cole, 1996). The selection criteria mean that the forthcoming WHO chart will come into the second category. Recent plotting of the growth of a sample of Swedish infants, from a background where socio-economic factors and general social support for breastfeeding helped to ensure optimal feeding patterns, confirmed that such a breastfed chart would reflect the growth pattern of predominantly, as well as exclusively, breastfed babies (Aarts *et al.*, 2003).

Growth data from a large randomized controlled trial on breastfeeding support in Belarus has provided some interesting insights. In this study, hospitals and their associated clinics were selected and randomized to receive staff training and implementation of the 'Ten Steps to Successful Breastfeeding' used by the WHO/UNICEF Baby Friendly Initiative (WHO/UNICEF, 1989). The outcomes of over 17 000 infants born in the hospitals, whose mothers had chosen to breastfeed, were monitored (Kramer *et al.*, 2001).

Taking the weights of babies in the study exclusively breastfed for at least 3 months, across both arms, Kramer *et al.* (2002) found that their growth showed the pattern of an early steeper rise and later 'dipping' down the centiles observed in previous studies. They observed that this never led to absolute weight 'faltering' below the WHO/CDC centiles, as found in other studies. This may be because of local factors, but led these authors to ask whether the previously observed 'faltering' is indeed biological or because of inherent biases in observational data collection. Three important possible sources of bias are suggested – these might affect any growth chart based on a cohort of breastfed babies. Firstly, there are likely to be differences (e.g. socio-economic factors) in any population between women who choose to breast or bottle feed. These may fully or partially account for differences in their babies' growth and be difficult to control for. Secondly, reverse causality may operate; when women whose babies are growing slowly may supplement and be excluded from the data on the chart, however, the slow growth may have been as a result of biological rather than feeding-

related factors. Finally, there is a theoretical possibility of selection bias, in which babies 'whose modest growth does not tax their mother's milk supply' are those most likely to continue being breastfed (Kramer *et al.*, 2002, p. 344), with the largest or fastest growing babies also supplemented and lost to the chart.

These are speculations, but if both the last two were to operate – removing both the slowest growing and the fastest growing babies from a breastfed data set – this would narrow the absolute spread of the centiles, without necessarily affecting the mean. Using a population chart based on such data for an individual baby in either category would then tend to suggest that this individual is on an extreme centile. This could lead to a predictive feedback effect, where babies who are lightest and heaviest are seldom breastfed without supplements, meaning they are not included in any further charting, and reinforcing concerns about breast milk adequacy for 'normal' weight gain. It would be helpful if any chart based on breastfed babies accounted for individuals who were originally recruited, but whose data was then not included in the chart.

Fomon (2004) raised concerns whether a chart based on data from breastfed babies is a suitable reference for measuring the growth of artificially fed babies. This was in the context of trialling the adequacy of a novel infant formula, but it may be only a matter of time that the use of a growth chart based on breastfed babies is queried for use in an individual baby fed on breast milk substitutes. De Onis & Victora (2004) explicitly laud the forthcoming WHO chart as it 'establishes the breastfed infant as the normative growth model' (p. 86).

Growth charts in the UK

UK charts have sparked their own debates. Country specific charts rather than international growth references are commonly used in Europe (de Onis *et al.*, 2004), with the Tanner Whitehouse chart in UK use from the 1960s (Goldstein & Tanner, 1980). In 1990 an updated UK chart was compiled and introduced, in response to concerns that the secular trend, or changes in growth over time, meant the whole popu-

lation was no longer well-represented by the chart (Fry, 1994; Freeman *et al.*, 1995; Hulse & Schilg, 1995). Data sampling for the Tanner Whitehouse chart was conducted in one geographical area and so was felt not to be nationally representative (Freeman *et al.*, 1995). Savage *et al.* (1998) prospectively measured the growth of 127 Scottish infants (39% of whom were breastfed for at least 2 months), using the new chart, and concluded that it was appropriate for clinical use. The Royal College of Paediatrics and Child Health, in a review of available charts, state that the 'UK90 reference ... is the only useable reference that can be recommended' (Wright *et al.*, 2002, p. 13). It is not known if every authority has adopted its use.

The section of the 1990 UK chart covering the first year of life is based on three data sets: Whittington birthweight data (one measurement taken on day 2, and not discussed further here), British Standards Institute (BSI) data, and Cambridge Infant Growth Study data (Freeman *et al.*, 1995; Cole *et al.*, 1998). The Cambridge study included 252 children recruited between 1984 and 1988. Their social class profile matched that of Cambridge, a relatively affluent area, and 98% were white. Infants were 'screened by midwives before recruitment, and those thought to be at risk were excluded', which would have the effect of increasing the homogeneity of the population (Cole, 1998, p. 2706). Babies were weighed every 4 weeks (Cole, 1998; Cole *et al.*, 2002). One hundred and twenty of the babies were breastfed for at least 24 weeks, with solids introduced at a mean of 15 weeks. The other 132 fell into two roughly equal groups, one wholly fed formula from 3 weeks (but possibly breastfed before that), and a mixed fed group, with some breastfeeding for up to 20 weeks (Cole *et al.*, 2002).

The British Standard data set is cross-sectional, and was collected for a syndicate of UK retailers and garment manufacturers (BSI, 1990). In order to collect a representative sample, a wide spread of geographic locations were used, and a spread of socio-economic and ethnic groups (BSI, 1990), although only the data for white children were used to construct the UK90 chart (Freeman *et al.*, 1995). No separate charts have been developed for monitoring growth in UK ethnic

minority populations, although use of a rule of thumb 'shift' in reading the centiles for different populations has been suggested (Chinn *et al.*, 1996). Length of time individuals have spent in the UK (which tends to bring child growth nearer the population norm) and interethnic relationships, however, confound simple adjustments (Fry, 1994; Chinn *et al.*, 1996).

Feeding method is not recorded for babies in the BSI survey, but there is no reason to think they do not represent both breast and bottle-fed. One hundred and sixty-three children from the age of 0–3 months, and 90 children from the age of 3–6 months were included, with sampling intended to provide a good spread across each age category (BSI, 1990, pp. 17–18). Thus at any one age, the Cambridge sample, in which three-quarters of babies were initially breastfed, is larger than the BSI sample, so that, as far as can be ascertained, the majority of babies used for the chart were breastfed in the early months. This challenges the popular perception that, as one distraught mother put it 'those evil weight charts health visitors worship as their bible, are only based on white babies who are bottlefed' (Saxby-Bridger, 2000, p. 10). This means that critiques of the pre-2000 international reference, as being unsuitable for assessing a breastfed baby's growth, because of being based predominantly on formula-fed babies, cannot simply be transferred to the UK chart. However, at some stage during the first 6 months it is possible that the numbers of breastfed infants included in the data of the chart are equal to or lower than the number not being breastfed. This is one of many details which might be of interest to have in documentation with the chart as provided for health professionals. It should also be noted that 'there were appreciable offsets between the data sets' and this necessitated adjustments (Cole *et al.*, 1998, p. 410).

Children for the BSI data set were recruited through a variety of means (Freeman *et al.*, 1995), and the possibility that the sample was somewhat self-selected – because some approached declined to participate – is acknowledged (BSI, 1990). No information is given on how many may have declined or for what reason. One could speculate that parents whose children's weight were already causing them concern might be less inclined to participate in inten-

sive anthropometric measurement. If so, this could particularly affect the 'outliers' of the data – the babies with most extreme body weight and size. The screening of infants for inclusion in the Cambridge Infant Growth Study noted above might have the same effect. Individuals who are most extreme can have a great effect on the highest and lowest centiles (Cole & Green, 1992).

In sum, the UK90 chart combines cross-sectional and longitudinal data; there was some selection of babies for inclusion; there is a mix of breastfed and non-breastfed infants; and an important part of the sample comes from one geographical area.

UK chart for breastfed babies

In 2002 a new UK 'Breast from Birth' chart, was announced (Fry, 2002). It was based on the data for the 120 Cambridge babies breastfed to a minimum of 24 weeks in the Cambridge Infant Growth Study (Cole *et al.*, 2002). It was presented as a tool to avert 'pressure on the mother to switch the child to formula or complementary food prematurely' (Cole *et al.*, 2002, p. 1296). Fry (2003) argues that these charts should become the norm in use for the UK for all babies, although he reports concern by 'senior paediatricians' about this. He asserts that formula-fed infants tracking along a higher centile is 'far more acceptable to most mothers than seeing their children's weight gain fall away from that of other babies' (Fry, 2003, p. 126). Whether this is currently universally the case, or if it will continue, as increasing attention is given to childhood obesity, remains to be seen². A senior neonatologist³ (Williams, 2002) welcomed the charts for clinical use, as a useful way to focus attention on the distinctive shape of breastfed baby's centiles, although he considers it may understate the extent of either the apparent 'faltering' from about 3 months or the 'accelerated' growth exhibited by exclusively breastfed babies in the early months. Those recommending the chart as a way of reassuring

²Obesity is discussed in Sachs *et al.* (2005).

³Dr Williams is chairman of the Maternal and Child Nutrition Sub-Group of the independent Scientific Advisory Group on Nutrition. See: <http://www.sacn.gov.uk/>

both parents and health professionals that apparent faltering of breastfed babies from 3 months is normal have not commented on any possible effects of the steeper upward growth trajectory shown in the first weeks. If babies do not attain early good growth, will this be a spur to early assessment of breastfeeding technique, or will it lead to earlier introduction of supplements for these babies?

The Royal College of Paediatricians and General Practitioners has expressed caution about whether the data represents the whole country, as it was all collected in Cambridge. They had further reservations as to whether babies whose mothers followed infant feeding recommendations of the 1980s are the best standard for breastfed babies of the 2000s (Elliman & Bedford, 2002); for instance, the mean age at introduction of solids was 15 weeks (Cole *et al.*, 2002). It is not clear whether those whose growth is charted on the 'Breast from Birth' chart were prospectively selected at birth, or whether they are the babies in the Cambridge study who 'stayed the course' to be breastfed for at least 24 weeks. If the latter is the case, babies of concern, either because their growth was faltering, or because they were 'too demanding' may have left this group if supplements were introduced. While still in the study, and represented on the UK90 chart, they would not remain in the data analysed for the 'Breast from Birth' chart. Theoretically, this could have the effect of narrowing the spread of the centiles, due to the biases suggested by Kramer *et al.* (2002). Further documentation clearly describing the data on which the chart is based would be welcome. So would a study such as that conducted by Savage *et al.* (1998) for the UK90 chart, in which a group of breastfed babies, prospectively recruited, had their weight charted on the 'Breast from Birth' chart.

As noted, the WHO investment in a new growth chart based on breastfed babies derives from consensus that interpretation using the previous chart led to inappropriate recommendations to supplement. However, no study has been discovered which compared the use of a conventional with a breastfed baby growth chart on outcomes such as duration of breastfeeding, use of supplements, or confidence in breastfeeding. Would a different chart improve care?

Smoothing the curves

Centile charts are constructed from the raw data and 'fitting smoothed centile curves has always been something of a subjective exercise' (Cole & Green, 1992, p. 1314). The placement of centile lines in the UK chart depends on assumptions made about the distribution of the data, and also on a series of mathematical procedures undertaken to ensure that the most extreme outliers (the lightest and heaviest babies) do not skew the chart (Cole & Green, 1992; Cole, 1998; Cole *et al.*, 1998). When an individual baby falls outside or near the extreme centiles, a referral is triggered, but these are also the centiles which have been most 'smoothed', and which rely on the fewest individuals in the data set.

Breastfeeding 'style' and growth

A small study by de Carvalho *et al.* (1983) found babies randomized to be fed on a 3–4 hourly schedule were lighter at 15 days than babies fed 'ad lib', although there was no difference by 35 days. Quandt (1985) in a study of 62 US babies, found a strong association between growth and breastfeeding 'style': a composite measure of feed frequency, feed length and feeding responsiveness to infant cues (Quandt, 1986; 1995). Babies who were exclusively breastfed longest both fed more often during 24 h and were fatter at 1 month. Woolridge (1995, 1996) explains this by proposing milk fat content rather than quantity as the key aspect of growth. A small study of the effects of different patterns of breast usage suggest that babies can regulate their own fat intake if mothers respond to their feeding cues and they can feed as they require (Woolridge *et al.*, 1988). Effective breastfeeding technique influences the ability of the baby to access optimal fat during a feed (Renfrew *et al.*, 2000). A growing understanding of milk production physiology (Daly & Hartmann, 1995a, 1995b; Hartmann *et al.*, 1996; Cregan & Hartmann, 1999; Mitoulas *et al.*, 2002) explains how biological differences between individual women may mean that culturally imposed patterns (for example avoiding night breastfeeds, and placing value on longer interfeed intervals) can adversely

impact on the milk production of women with relatively smaller breast capacity.

Hörnell *et al.* (1999) conducted a prospective, longitudinal study of 506 mothers committed to breastfeeding, in Sweden*. Daily records were kept of the number of feeding episodes and anything that was given other than breast milk, and fortnightly a record of timing and duration of feeds was made by the mother. Wide variations between mother-baby pairs were recorded, with an association between a longer duration of both exclusive breastfeeding, and any breastfeeding, with an increased frequency of feeds. At 4 months 159 of 189 exclusively breast milk fed infants were fed at night – 48% once, and one individual as many as five times. All the mothers considered that they fed 'on-demand', and the differing feeding patterns may reflect different physical storage capacities in different mothers.

Kramer *et al.* (2002), in the PROBIT study, found that the mean weight of all babies in the intervention group (breastfed babies born in hospitals randomized to provide 'Baby Friendly' care), was significantly higher at 1 month than for those in the non-intervention group; this difference increased to 3 months, and then declined. The intervention babies had a rate of exclusive breastfeeding of 43.3% at 3 months, compared to a rate of 6.4% for babies born in control hospitals. It is possible that the difference in weight was due to different biological responses of infants to human milk or breast milk substitutes. However it could be that support for practices which encourage the establishment and maintenance of exclusive breastfeeding for mothers of babies in the intervention hospitals resulted in differences in breastfeeding style, e.g. increased frequency and length of feeds, and toleration of night feeds, and resulted in this difference.

Future gathering and charting of weight in a group of breastfed infants that includes noting breastfeeding style could provide further insights into the effects of this on infant growth.

*These were the same babies whose weights were reported by Aarts *et al.* (2003), noted above.

Scales

Scales are the other main tool needed alongside growth charts, to monitor infant weight. In the UK electronic, self-zeroing scales are recommended (Hall & Elliman, 2003). It is unknown how many areas have provided these. There is also no information available on whether all authorities ensure that scales are checked and re-calibrated regularly, and how frequently this is carried out.

Some small studies provide clues to accuracy in use. A comparison between mechanical and electronic scales, when used for preterm babies in the US, found that the latter were more accurate (Kavanaugh *et al.*, 1990). A Canadian study of 30 scales (balance, spring and electronic) in hospitals, tested them with standard weights, and different weighers. This found that inter-rater agreement was weaker at higher weights and newer were more accurate than older scales, although this might relate to how recently the scales had been recalibrated. The authors conclude that inaccuracy 'probably results from an interaction between human and mechanical error' (Burke *et al.*, 1988, p. 248). In Nottingham all scales in community use for weighing babies – standard, balance and electronic – were tested using two large stones of known weight. In total, 91% of readings were deemed acceptable at within 30 g. The electronic scales were most accurate – but were also the newest. Local health visitors expressed concerns about accuracy of some scales, but these were not always the same scales identified as inaccurate through testing (Steiger & Polnay, 1995). In a Coventry study, three standard weights were used and 30% of the scales, of a variety of types, were found to be outside a range of ± 20 g for the 10 kg weight (Spencer *et al.*, 1996). These authors say 'a survey of practice in the "everyday" clinical setting' is essential to assess the level of error; no such survey has been found (Spencer *et al.*, 1996, p. 7).

Authors of these studies comment on difficulties of interpretation when babies are weighed on different equipment. In some areas several clinics may be available and clinic-based activities such as baby massage classes or breastfeeding support groups, which have the option of weighing, may mean mothers travel between scales. As Burke *et al.* (1988) remark,

inaccuracy could result not only in false identification of children who are considered to have weights of concern, but also in missing those who have inaccurate 'normal' readings.

Good practice in measuring and recording baby weights

When charted weight is used to make clinical decisions, accuracy of weighing and recording are important. If weight trajectories are misinterpreted, inappropriate reassurance or inappropriate interventions could result.

Hypothetically, professionals or others may encourage a breastfeeding mother with a baby who is deviating below an expected centile position to offer supplementary feeds, while not doing so for a formula-fed baby with an identical growth pattern. Therefore ensuring accurate weight information may be more crucial for breastfed babies.

Accuracy of measurement and accuracy of recording

A few small studies examining these issues were located; none focussed solely on breastfed infants. Alsop-Shields & Alexander (1997) tested weighing in Australian community clinics, similar to those in the UK. Seven babies were weighed naked, thrice daily over 48 h on (currently) standard baby scales. Weights taken at the same time between day 1 and day 2 in the same baby, varied between 5 and 100 g, and each baby's weight varied over the course of 24 h, with no universal tendency – some grew heavier, others lighter. Over time, women may attend one of several local clinics held at different times of day affecting weight measurements.

Naked weighing is recommended (Davies & Williams, 1983; Hall & Elliman, 2003) but it is not known how universally it is practised. Spencer *et al.* (1996) discovered that a number of clinic premises were not warm enough. Alsop-Shields & Alexander (1997) weighed nappies and clothing to show that estimating the effect of garments worn during weighing contributes to variation in recorded weight.

Charting the weight of a baby, in the current UK context, may involve weighing in pounds and ounces,

converting to kilos (this may be done automatically by the scale, although a conversion chart is provided in the PCHR (CGF/RCPCH, 2004), writing this down and then plotting on the chart. A simple transposition of digits, or an error in plotting is possible. The only published UK audit on plotting accuracy showed that a striking 28.55% of the 611 points for 50 premature infants during their first year, were incorrectly plotted (Cooney *et al.*, 1994). Most (94.7%) of the errors were with respect to age, either through failure to correctly adjust for gestational age or through misreading of calendar dates, the former of which would not apply to full term babies. A US retrospective chart review of 149 well-baby visits (for children up to 18 months old) revealed that for 15% of visits, weight was not documented (Chen & Shiffman, 2000). Hall & Elliman (2003) cite inaccurate measurement and charting as one reason for poor performance of monitoring. Wright (2002), in a review of using growth charts, reminds that 'plotting growth charts is difficult and should not be done in a rush while talking to parents' (p. 279).

Variation could come through different individuals weighing (Burke *et al.*, 1988; Hall & Elliman, 2003). In the small Australian community study five nurses were asked to weigh the same baby three times at intervals, and only small intra- and interobserver errors were noted (Alsop-Shields & Alexander, 1997); a larger study, including a range of those who weigh in practice, would be of interest.

Hall & Elliman (2003) suggest that weighing be done in consistent relation to feeding, e.g. just after a feed every time. As with weighing on the same scale at a consistent time of day, it is unknown if this information is consistently conveyed to parents.

The level of accuracy of recorded weights remains relatively under-examined. The interpretation of risk to an individual baby and decisions to refer for screening tests, or to supplement breastfeeding, may be closely based on these records.

Frequency of weighing

In the UK there has been debate on the minimum frequency with which babies' growth should be measured. This has been especially heated with regard to

measurement of height/length. Fry (1997, 2000a, 2000b, 2000c) has warned of possible legal action by parents of children with growth disorders which are not diagnosed. Fry (2000c) asserts that many health visitors will monitor 'because they intuitively know it to be of value' (p. 615). As chairman of the Child Growth Foundation, a charity which represents parents of, and those with, growth disorders, and which produces the UK growth charts, Fry writes frequently, and passionately, on the topic of growth monitoring, and also delivers training sessions (Fry, 2002).

In 1989 the first 'Hall' report (Hall, 1989) represented the ambition of co-ordinating practice over the UK; three further editions have been published (Hall, 1992; Hall, 1996; Hall & Elliman, 2003). A 1998 meeting of paediatricians produced the 'Coventry Consensus' recommendation that babies should be weighed at birth, and babies who are growing normally 'should only be weighed at immunization and surveillance contacts, and should not be weighed more than once every 2 weeks under the age of 6 months and once a month thereafter', so that there are fewer weighing episodes, but more attention is paid to measurements taken (Wright, 2000, p. 7). Two senior paediatricians, Hall (2000) and Wright (2000) reported the conclusions of the consensus, although Fry (2000c) has asserted that there was dissent on the recommended frequencies of measurement. The 'Coventry' frequency is incorporated in guidance (Hall & Elliman, 2003) but it is unknown how this may have affected practice. These frequencies apply to *routine* weighing; 'where ever there is clinical concern' a child should be weighed more intensively (Wright, 2000, p. 7)⁵. Alsop-Shields & Alexander (1997) weighed seven babies three times a day over 48 h, calculating that diurnal and other biological fluctuations mean that weights recorded more frequently than fortnightly, under 9 months of age, risk variation which is greater than true weight changes, and so confirm the suggested minimum.

⁵The Coventry meeting was arranged by The Child Growth Foundation and one of the supporting organizations was Cow and Gate, a company which manufactures infant formula milks, available in the UK (Hall, 2000).

Hall & Elliman (2003) acknowledge that parents 'will continue asking for facilities for their baby to be weighed or to weigh the baby themselves' (p. 180). In the most recent infant feeding survey, 9% of women took their baby to a child health clinic weekly, a further 34% once a fortnight, with another 45% attending monthly at 4–5 months (Hamlyn *et al.*, 2002), with attendance patterns similar for breast and bottle fed babies (B. Hamlyn, unpublished personal communication, 2004). It is likely that frequency is greater at earlier ages. In an audit of clinic records in Newcastle, Wright (1997) found that the babies who were lightest were most often brought for weighing: which she took to mean that services are most used by those who most need them, but could also reflect a general anxiety about any baby who is on a low centile. Further investigation of patterns of attendance might lead to an increased understanding.

A survey of parents using clinics in Kingston and Esher found that 93% of 564 parents who responded gave weighing the baby as their reason for attending clinic (Sharpe & Loewenthal, 1992). Davies (2000) notes that the practice of frequent weighing has become 'entrenched' and that 'it would take more than an Act of Parliament to stop it' (p. 201). Daws (1985), a psychotherapist, remarked 'bringing the baby to be weighed is the focus for the baby clinic. Parents can visit with no other ostensible reasons than to weigh the baby. This alone validates the visit'. (p. 79). Health visitors themselves acknowledge that the culture and the physical layout of clinics would need to be addressed if this is to be changed (Fulford, 2001; Normandale, 2001).

A review of literature on growth [weight] monitoring for the Cochrane Collaboration (Garner *et al.*, 2000; Panpanich & Garner, 2003) found only two studies which met their trial inclusion criteria: neither was in the UK or a western country. These authors expressed surprise at the paucity of research 'given the level of investment in growth monitoring worldwide' (p. 1). They also highlight the amount of health worker time invested in routine weighing. A cost analysis of UK child health surveillance showed health visitors spent an average 31.3 seconds (cost 11 pence) weighing babies and discussing feeding for 144 seconds (cost 53 pence) at the 6–8 week child

health check (Sanderson *et al.*, 2001). If such timings are repeated whenever women attend, and this is weekly or fortnightly, costs begin to add up. The brevity of feeding discussions observed raises concern about the quality of interaction with parents (Gerein, 1988). Panpanich & Garner (2003) further raise the issue of potential harm to parental confidence through weight monitoring, and note that this has scarcely been considered.

What this review adds

The review brings together a range of literature, examining weight monitoring practice and issues of 'breastfeeding style'. The UK90 and 'Breast from Birth' growth charts are discussed. Published information on the feeding patterns of the infants included is gathered together. This is compared with data collection for the forth-coming WHO breastfed growth standard. Studies of weighing accuracy and frequency are reviewed.

Recommendations and conclusion

This review investigates the literature relevant to weighing breastfed babies in the UK, focussing on the issues of charts, scales, frequency of weighing and accuracy of weighing and plotting. Literature from a variety of disciplines has been brought together and a number of areas in which there is a paucity of evidence have been noted.

Monitoring infant growth is an important part of child health care services and regular routine weighing of babies is the most common manifestation of this in UK practice. Many parents bring their babies for weighing frequently. Parents, and even health professionals, may assume that it is a straightforward matter of weighing and plotting weights on the chart, which then yields a clear indication as to the well being of the baby. In reviewing the literature on the construction of the charts in use in the UK, as well as the chart being designed by the WHO, it can be seen that decisions taken in selecting which children to include in centile charts, how the data is collected, and how it is treated, colours the type of growth reference or standard obtained. This then affects the interpretation of the growth trajectory, plotted on the chart, of an individual baby. The relation of current growth charts to what is understood about the growth

patterns of breastfed infants also introduces a source of confusion. Misunderstanding may undermine confidence in breastfeeding, and lead to unnecessary intervention – either by health professionals or by parents who are anxious about weight.

All professionals who weigh babies and discuss the weight with parents should receive clear training and updates on these issues. Using the chart based on data from breastfed babies available in the UK might improve understanding, however, it has not been tested to see whether it improves referral accuracy and parental confidence or whether it affects breastfeeding duration. Investigation of such issues should be undertaken before this chart is adopted.

An audit of the magnitude of error in current weighing practice would be a welcome addition to the literature in this area. The 'technical' issues of scales used, accuracy of recording, when and how often to weigh, and the effect these have on the plotted result highlight infant weighing as a practice requiring skill in carrying out. Attention to good practice, including informing parents of the influence of such factors on recorded weights, should help give the best assessment of child well being, and for professionals to choose appropriately between intervention and referral or offering support and encouragement for current breastfeeding practice to continue. In particular there is a mismatch between common practice and recommendations in the frequency of routine weighing where infants give no other indication for concern, and it would be fruitful to investigate reasons parents have for frequent weighing visits. Action research may be one fruitful way of trying out methods of reducing frequency while providing sources of reassurance to parents about infant well being.

The effects of attempting to survey the literature relevant to the every-day practice of weighing breastfed babies, for these reviewers, gives a feeling of standing on a hill in fenland – a number of areas of firm ground are visible, however, the connections between them are often shrouded in low-lying fog, with speculation and assumption filling in the contours between. This review does not claim to have penetrated all areas of fog, but hopes to direct attention to where more study is needed in order to improve the quality and usefulness of weight monitoring.

Recommended topics for future research, audit and consideration:

National audits of UK clinical practice: what scales are in use; do all areas use the UK90 chart; how widely is the 'Breast from Birth' chart in use; what training do clinicians receive in weighing babies?

A study comparing the effects of the UK90 and the 'Breast from Birth' charts on breastfeeding mother's confidence and rates of breastfeeding duration.

Observational studies which note 'breastfeeding style' as well as growth patterns.

A survey of the accuracy of weighing in clinical conditions.

A survey of weight recording in a community setting.

Investigations of the reasons mothers attend for weighing with great frequency – with possible action research studies to reduce the perceived need for frequent weight monitoring in well babies.

Acknowledgements

The authors are grateful to two anonymous peer reviewers whose comments on an earlier draft were very useful.

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Weight monitoring of breastfed babies in the United Kingdom – interpreting, explaining and intervening

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Abstract

Weighing infants in their first 6 months is an important aspect of growth monitoring and a common activity of child health care services worldwide. During the same 6 months, support for establishing breastfeeding and the promotion of continued exclusive breastfeeding are important activities of health professionals. Parents and health professionals may perceive conflicts between achieving both robust growth and continuing breastfeeding. In this narrative review, the literature on weighing breastfed babies in the United Kingdom is examined. A companion paper examined issues of growth charts, scales and weighing frequency and accuracy. This paper considers issues of interpretation of the plotted weight values for individual breastfed babies, noting the complexities of growth patterns, which may lead to difficulties of accurate identification of those individuals whose growth merits further investigation. Little attention has been given to issues of explaining the interpreted growth curves to parents and this issue is explored and noted as of importance for further study. Research evidence on choosing appropriate interventions to improve the growth of breastfed babies is reviewed. The paucity of such evidence leads to suggestions for future study. This review gathers together a wide range of literature from many different perspectives, with the hope of informing weight monitoring practice so that this can both identify infants whose weight may be of concern, and who may need appropriate intervention, and support continued breastfeeding.

Keywords: breastfeeding, infant growth patterns, growth monitoring, weighing infants.

Introduction

Improving breastfeeding duration is a public health goal in the United Kingdom. Monitoring babies'

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weights provides a focus for interactions between mothers and health care providers. A companion paper examined issues of chart design and weighing frequency and accuracy (Sachs *et al.*, 2005). This current paper aims to examine:

- the interpretation of the meaning of charted weight trajectories by health professionals;

- the communication of the meaning of fluctuations shown on the chart from health professional to parent; and
- the type of interventions considered when there is concern, and the type and availability of specialist input, with particular focus on the breastfed baby and supporting breastfeeding.

Aims and methods of the review

In a Cochrane review, Panpanich & Garner (2003) conclude that there has been a great level of investment but 'little research evaluating ... potential benefits and harms' of weight monitoring (p. 1). This review surveys a wide range of the disparate literatures relevant to routine weighing of breastfed babies in order to shed light on issues of relevance. Ideally, original research evidence would be available for all aspects of interest: in the absence of a consistent level of such evidence, this review is inclusive rather than proscriptive and seeks to investigate widely. A fuller description of the review rationale is given in Sachs *et al.* (2005). A major conclusion is that the potential literature is vast and covers many disciplines, resulting in a review which does not provide answers to discrete questions, but attempts to map a wide canvas, and delineate areas in which further detailed research, audit, review and reflection are needed.

Databases searched: Medline, CINAHL, Cochrane, British Nursing Index, MIDIRS. Many references from identified papers were followed up. Search terms: growth monitoring; growth chart; baby weight; infant weight; breastfeeding; scales.

What is known about these issues of weighing breastfed babies in the UK?

'Insufficient breast milk' is a major reason given for supplementation and abandonment of breastfeeding. Infant weight gain may be used to confirm a perception of breast milk insufficiency.

Interpretation of the weight gain trajectory of an individual baby is complex.

Faltering growth can signal a number of possible problems; these may include aspects of breastfeeding.

UK parents hold their child's plotted growth chart, but receive little information on how to interpret it.

Breastfeeding and its uptake in the UK

Breastfeeding is recognized internationally as an important part of child health and survival (WHO, 2002). Recommendation in the UK is for babies to be breastfed exclusively (with no supplements of formula, food or water) until 6 months (Department of Health, 2003). Differences in a variety of health outcomes have been documented between breastfed and never breastfed babies [Heinig & Dewey, 1996; American Academy of Pediatrics (AAP), 1997]. Breastfeeding also has a positive impact on the subsequent health of women (Heinig & Dewey, 1997). It has long been acknowledged that breastfeeding provides an important protection against mortality in developing countries (WHO, 2000) and this has recently also been found to pertain to developed countries (Chen & Rogan, 2004). An increased conviction can be noticed in the statements about the importance of breastfeeding for UK babies, over the past decade (Standing Committee on Nutrition British Paediatric Association, 1994; Nicoll & Williams, 2002).

Is the most recent of a series of six 5-yearly surveys commissioned by the UK Departments¹ of Health, 13 000 women were sent questionnaires, with respondents followed up for a second and third stage. Seventy-two per cent of women responded at the initial stage (babies were on average 46 days old), with 63% and 55% of the initial sample responding at stages two and three (4–5 months and 9 months, respectively). This survey provides the most comprehensive national picture of infant feeding practice in the UK. In 2000, 69% of women in the UK ever breastfeed, and by the time the baby was 6 weeks old, 42% were breastfeeding at all. At the time of the survey, policy was that babies be breastfed for 4–6 months (COMA, 1994): it can be seen that practice fell short of recommendations.

¹The Department of Health, the Scottish Executive, The National Assembly for Wales, and the Department of Health, Social Services and Public Safety in Northern Ireland.

Insufficient milk and infant weight gain

A variety of factors appear to influence women; issues of weight gain are just one of these. In the first 2 weeks, 'baby falling asleep/slow feeding/not gaining weight' was reported by roughly 10% of *all* women (Hamlyn *et al.*, 2002, p. 118), while at 4–5 months, 6% of breastfed and 5% of non-breastfed babies were 'not gaining weight' (p. 129). Thus, concerns about weight gain are not confined to breastfed babies, although some of the formula-fed babies may have been previously breastfed: it would be interesting to know how many never breastfed babies caused concern.

Hamlyn *et al.* (2002) note that 'insufficient milk' is the most common reason given for stopping breastfeeding between 1 week and 4 months. It has been debated whether poor breastfeeding technique; following inappropriate rules limiting feed timing and duration, and lack of skilled assistance creates an iatrogenic physical lack of milk or whether poor understanding of the physiology of breastfeeding creates a 'perceived insufficient milk syndrome' (see Dykes & Williams, 1999 for fuller discussion).

A perception of insufficient milk may be based on physiological reality. In a Swedish study, 51 women committed to breastfeeding were followed longitudinally to 18 months. Those who experienced 'transient lactation crises', about the adequacy of their milk supply, had babies who were consistently lighter than others – although all babies grew well (Hillervik-Lindquist *et al.*, 1991). An understanding for an individual mother that milk supply is sometimes problematic may be related to physical production which is adequate, rather than bountiful.

Level of concern about infant weight gain – and effects on breastfeeding

Although concern about infant weight gain has been cited as a factor undermining breastfeeding, few studies have directly investigated this. More research which attempts to understand the influence of routine weighing would be worthwhile. Insights can, however, be gleaned; for example, a questionnaire

sent to a cohort of 576 UK mothers showed that of those who discontinued breastfeeding by 28 days, 50% did so because of worries about the volume of milk the baby was taking or the baby's weight gain (Wylie & Verber, 1994). Longitudinal telephone interviews on feeding practices with 2450 Italian women showed a small, but significant, relationship between lower infant body weight at 1 month of age and a shorter duration of exclusive breastfeeding (Giovannini *et al.*, 2004). Audits of telephone calls received, by two volunteer breastfeeding organizations, showed that in Australia, 15% of callers whose babies were 0–3 months and 17% whose babies were 3–6 months were concerned about the baby's weight (Grieve & Howarth, 2000). In the UK, 11% of all callers to a national telephone helpline mentioned their baby's weight gain as a concern (Broadfoot *et al.*, 1999).

Qualitative literature also provides indications of the impact of weighing and concern with milk quantity. Six out of 10 women interviewed longitudinally in North-west England expressed concern that they might not have adequate milk, with four discontinuing breastfeeding for this reason (Dykes & Williams, 1999). Women in this study who did not focus on the weight gain to gauge breastfeeding success breastfed for longer. A small USA study found that bottle-feeding women felt they could judge the adequacy of their baby's nutrition by measuring the amount of formula given as well as weighing the baby, but breastfeeding women had only the latter, and this quantifiable measure of breastfeeding success was reinforced in encounters with health professionals (Marchand & Morrow, 1994).

Behague's (1993) ethnographic study in Brazil found that breastfeeding women in a low socio-economic setting, who had previously identified themselves as having 'weak milk', responded to weight monitoring positively. They valued the air of scientific authority conveyed by being able to refer to the chart and its interpretation. However, as they placed a strong emphasis on keeping infants' weights up, they sometimes gave supplements in order to *prevent* falls, not just in response. Thus, weighing, while valued by mothers, impacted negatively on breastfeeding.

Interpretation

Researchers and clinicians have remarked on the difficulties of interpreting an individual baby's plotted growth trajectory (Davies & Williams, 1982; Davies, 2000; Elliman *et al.*, 2002; Wright, 2002; Hall & Elliman, 2003). Growth charts show population averages at any one age. Even where charts are based on longitudinal data, any one centile line may not represent the growth pattern of any individual baby.

Is charted weight a screening tool?

In literature on weight monitoring, charted weight gain trajectories are sometimes referred to as screening 'to detect individuals at greater risk of health or nutritional disorders' (de Onis *et al.*, 1997, p. e9). However there is too low a level of sensitivity or specificity to allow growth monitoring alone to successfully screen individuals to identify pathology (Hall, 2000; NSC, 2000). Children who exhibit a sustained fall through two centile spaces 'only constitute a high risk group who would merit closer investigation, rather than a definite diagnostic group' (Wright, 2000, p. 7). It is unclear how far parents understand that plotted centiles require interpretation rather than representing an actual danger to the baby. In the new parent-held child health record (PCHR) (CGF/RCPCH, 2004), weighing is listed under 'checks' rather than 'screening' and stresses that both are 'done to pick up problems before they have been noticed' and 'can never be accurate in all cases' (p. 15). This caveat is in a different section from the one containing the weight charts, so this caution may not be picked up by parents when they study the chart.

Although weight monitoring is not considered to be sensitive enough to qualify as 'screening', it is interesting to note some general points about good practice for screening programmes. It is suggested that it is important to provide information on both the benefits and risks, so that individuals can decide whether to participate (Raffle, 2001). Clinicians are urged to consider the ethical implications of screening, and any adverse effects (Grimes & Schulz, 2002). Weighing the baby at a clinic visit is presented as

taken-for-granted, and potential harms of weight monitoring have not been investigated (Garner *et al.*, 2000; Panpanich & Garner, 2003). Public understanding of screening may include a belief that all detection can lead to prevention of morbidity or mortality, and misunderstanding the possibility of false positives and false negatives (Raffle, 2001). It would be useful to have a population study of babies weighed in a child health clinic, evaluating how many referrals on the basis of weight resulted in diagnoses or interventions and how many were missed (rate of false positives), and how many children later deemed to be of concern were not detected during routine monitoring (rate of false negatives). No such study has been found.

There is a need for clear information for parents, balancing the need for early detection for the few against raising anxiety for the many (Wright, 2000). If more comprehensive notes for parents on weight monitoring were provided in the PCHR, and consent sought before weighing took place (as in the screening model), this might provide a focus for more thorough explanation of what charted weights mean in relation to infant feeding and the health. Even if consent is not formal, but consists of asking whether parents want the baby weighed at any particular clinic visit, it could focus attention on the purpose of weighing and the possibility that it is not needed. This could be time consuming for health care professionals, but any resulting reduction in time spent on weekly or fortnightly weighing might compensate. It would be interesting to evaluate this approach on parents' confidence.

Literature for health visitors on weight monitoring

Health visitors regularly discuss routine weights with parents. There appears to be no one standard text used in the training of health visitors, or as a reference for the interpretation of plotted centile charts. A Health Visitors' Association (1979) publication, a quarter of a century ago, included an appendix on percentile charts, evidently introducing the concept and showed several sample charts with notes on interpretation. A more recent booklet gives information on taking good

measurements, and covers a few issues of interpretation (none directly relating to the breastfed baby), but is extremely brief (CGF, 2001). A manual gathering together some of the issues discussed in the previous paper on the design of growth charts, practical implications of these, and on issues of interpretation, might provide support for health visitors and consistency in interpretation, so improving both detection of babies with possible weight patterns of concern, and assurance on which patterns lie within normal limits. It would be important to discuss differences between formula- and breastfed babies. De Onis & Victora (2004) point to a worldwide need for training.

Interpretation of charted weight in the early weeks

It is expected that babies will lose weight immediately after birth, and regain this within 10–14 days. Sachs & Oddie (2002) reviewed literature on this for breastfed babies. Wright & Parkinson (2004) conducted a prospective cohort study of 961 term babies in the UK, and found that 20% of babies had not regained their birth weight by 12 days. Breastfed babies showed less mean weight gain, but this was accounted for by their greater birth weight (lighter babies lost less). The overall effect was that actual weights in the first fortnight were one half to one centile lower than growth charts (which do not depict any initial weight loss) would suggest, and the authors say clinicians 'should be warned of their major limitations in the first 3 weeks of life' (p. F256).

Wright (2000), states that 5% of UK infants shift up or down two intercentile spaces in the first 6 weeks, with less variability after this. It is not clear if this includes the effect of early postnatal weight loss and regain, but reinforces the need for cautious interpretation in the early weeks. By 6 weeks, 36% of women who began by breastfeeding have already ceased to give any breast milk (Hamlyn *et al.*, 2002, p. 37).

Distinguishing different patterns of growth

Wright (2000) asserts that failure to thrive (FTT) – now more commonly referred to as 'faltering growth'

(Underdown & Birks, 1999), is the main problem identified by routine weight monitoring in the UK. Other patterns of growth, which may be confused with faltering growth, are catch-down growth and a pattern of slow weight gain. Catch-up growth is another distinct pattern identified and discussed in the literature.

A table distinguishing between FTT and a slow weight gain pattern in a breastfed baby is available in a US medical text-book on breastfeeding (Lawrence & Lawrence, 1999, p. 404), and involves consideration of overall appearance, urine and stool output and breastfeeding indicators, as well as weight patterns. This is available, in expanded form, in another US publication (Mohrbacher & Stock, 2003), which is more likely to be accessible to UK health visitors but it is unknown how many health visitors have ready access to either of these texts.

Catch-up and catch-down growth are phenomena where a baby, relatively under- or over-nourished in the womb, climbs up or down the centiles to the growth pattern suggested by genetics (Tanner, 1989; Dettwyler & Fishman, 1992; Marcovitch, 1994). Chee (1997) in reviewing growth charts and breastfeeding, postulates that catch-down, where babies are 'offsetting their greater than average intrauterine growth with slower than average growth after birth', may be more likely for breastfed babies, because the uptake of breastfeeding is higher among women of higher social class, with better prenatal care and nutrition, and because women who smoke are less likely to breastfeed (p. 30). Wright (2002) provides pointers on distinguishing catch-down growth from faltering growth, using comparisons of parental centiles and noting that with catch-down growth, the length and weight centiles are likely to correspond and the former to be normal.

A recent retrospective analysis of 10 844 US children born in the 1960s and 70s showed 39% crossed two percentiles of weight-for-age in their first 6 months. The authors warn that clinicians need to be aware that such catch-up growth and catch-down growth during early childhood are normal phenomena affecting large numbers of children (Mei *et al.*, 2004). The study did not investigate effects of feeding method.

A further issue in interpretation is the statistical 'regression to the mean' effect in which any individual who is charted as being near either end of the distribution of measurements in a population, will tend, over time, to have measurements that become more like the average (Cole, 1995).

All of this complicates interpretation of a charted growth curve. An absolute loss of weight, as in an episode of acute illness, should be easy to detect, allowing for variations in measurements. Corbett *et al.* (1996) cite a review finding that failure-to-thrive was commonly defined as falling below the third centile (Wilcox *et al.*, 1989). They emphasise that it is the shape of the weight change trajectory which should be studied, with a fall of two standard deviations considered to be of concern (Wright, 2000). In recent practice, both measures are considered, with weights falling absolutely below the 0.4 centile on the UK90 chart deemed to 'require immediate referral' while those between the 0.4th and 2nd centile merit 'close observation' (Freeman *et al.*, 1995, p. 23) and a change of two standard deviations or centile spaces meriting referral (Wright, 2000).

The different shape of the centiles on a growth chart based solely on breastfed babies adds to the complexities of interpretation when using a chart such as the UK90 which is only partially based on breastfed infants (Sachs *et al.*, 2005). De Onis & Victora (2004) suggest 'anticipatory guidance to warn parents about the imperfections' of charts (p. 85). There is no study of breastfed babies in which some were charted on the UK90 chart and some on the 'Breast from Birth' chart, comparing rates of referral, supplementation, and levels of parental anxiety about weight, on which to base such guidance

Spencer *et al.* (1996) gave health professionals four 'test' charts: 33% misclassified a 'catch down' pattern of growth as 'poor weight gain', 15% thought the chart showing transient poor weight gain indicated 'failure to thrive', and 26% mistook the growth of a normal small baby for either 'poor weight gain' or 'failure to thrive'. If repeated in practice, such misinterpretations could lead to unnecessary referral and worry. Two individuals (3%) also failed to correctly identify 'gross failure to thrive', showing that a high rate of what would have been unnecessary referrals

did not ensure that all babies who should have been of concern would be identified. The use of sample charts in this study may tend to emphasise the chart as a stand-alone diagnostic tool, as no case history was supplied. No study using real cases to test assessment has been discovered.

Growth disorders or failure to thrive

One objective of monitoring is to ensure early referral for organic disease presenting with poor weight gain. Few disorders present with no symptoms other than unusual growth (Hall, 2000; Hall & Elliman, 2003). Weight may be useful in conjunction with other symptoms (Wright, 2000).

Lawrence & Lawrence (1999) remind that faltering growth *in* a breastfed baby does not automatically indicate a failure *of* breastfeeding. The sizable literature does not often consider correlations between method of milk feeding (breast only, breast and bottle or bottle only) and identified FTT. An exception is an audit by US paediatrician of 4 years of practice records, retrospectively identifying cases of breastfed babies under 6 months with faltering growth (Lukefahr, 1990). For some, the case notes indicated that a breastfeeding problem was the likely cause, but one in five had underlying illnesses. If another pathology is present, a change to formula-feeding in response to a perceived failure of breastfeeding could represent an additional physical challenge to the baby.

Concern has been expressed at poor rates of recognition of faltering growth by health visitors (Batchelor & Kerslake, 1990; Blisset *et al.*, 2002). If concern is identified, a UK baby would be referred to either a General Practitioner or a Paediatrician; and no study has examined their knowledge of the normal growth pattern of breastfed infants. Guise & Freed (2000) surveyed US resident physicians with a 46% response rate, and discovered that, although 99% plotted growth at well child visits, only 5% were aware of the different growth velocity of breastfed babies. This could lead to inappropriate diagnoses. Corbett *et al.* (1996) found that identification of faltering growth status through the 'relatively crude velocity measure based on the visual examination of growth charts' identified children who exhibited

poorer weight and height than matched controls. This study did not distinguish breastfed from other children (p. 1281). A review of FTT by a UK paediatrician, intended to guide clinical practice, discussed management of breastfeeding failure (Marcovitch, 1994). Three senior midwives critiqued the implication that women should be encouraged to supplement or abandon breastfeeding, commenting on 'what little confidence health care professionals now have in their ability to help a woman breast feed successfully' (Alexander *et al.*, 1994, p. 596).

Discussions of faltering growth interventions targeted at health visitors, appear to apply only after the first months as solid meals are implied (Underdown & Birks, 1999; Parry & Jowett, 2001; Blissett *et al.*, 2002). However, qualitative interviews with parents of babies referred to the Children's Society for such poor growth, found almost half described the problem as starting in the early weeks, or from birth (Underdown, 2000). No indication is given if any of these children were initially breastfed and if a change to formula-feeding was a response to the feeding difficulties. A study which aimed to develop a checklist to enable hospital nurses to improve documentation of feed observations includes sucking ability and infant comfort during feeding; however, the possibility of discomfort as a result of awkwardness in the way the mother was positioning and attaching the baby during breastfeeding (MacPhee & Schneider, 1996). Lactation Consultants, skilled in observing breastfeeding, describe distress in babies which is rectified by altering the way the mother holds the baby at the breast (Wilson-Clay & Hoover, 2002). Stevenson & Allaire (1991) point out that the physical act of feeding is a complex physiologic and social process, and Reilly *et al.* (1999) identified subtle neurodevelopmental disorders which might account for poor food intake in children previously diagnosed as having no organic cause of faltering growth. Wilson-Clay & Hoover (2002) report on clinical measures to support continued breastfeeding in such infants.

A large, questionnaire-based study of more than 14 000 babies in Bristol, found that children with persistent feeding difficulties at 15 months were less likely to have been breastfed beyond 4 weeks of age

(Motion *et al.*, 2001). No indication was given as to why mothers decided to stop breastfeeding these babies. Early feeding difficulties were poorly predictive of later problems, as so many babies were described as having them, but this study raises the question whether timely interventions with breastfeeding difficulties might either resolve feeding problems before they become persistent, or aid early identification of underlying conditions (Lawrence & Lawrence, 1999; Wilson-Clay & Hoover, 2002). A model presented for identification and intervention for faltering growth to health visitors does not include breastfeeding assessment (although feeding assessment is mentioned) or referral to breastfeeding specialists (Blissett *et al.*, 2002). Relationships between breastfeeding, breastfeeding difficulties, breastfeeding style and technique, and later faltering growth appear to offer a fruitful area of investigation.

Obesity

Obesity has been described as 'a new pandemic' whose 'root cause [...] remains unknown' (Kimm & Obarzanek, 2002, p. 1003). The associations between later childhood and adult obesity and infant diet have been investigated in a number of studies which examined survey data collected for other purposes. These vary in their definitions of overweight, obesity and of breastfeeding; and in the number of other variables controlled for. For example, overweight was defined as a body mass index (BMI) on or above the 90th centile by von Kries *et al.* (1999), Bergmann *et al.* (2003), and Toschke *et al.* (2002), but as a BMI of 95% or higher by Hediger *et al.* (2001), Gillman *et al.* (2001) and Grummer-Strawn & Mei (2004), while this same level was defined as 'obesity' by Armstrong *et al.* (2002). Individuals were measured as overweight or obese at ages ranging from 3 (Hediger *et al.*, 2001; Armstrong *et al.*, 2002) to 18 (Li *et al.*, 2003). Some studies compared ever breastfed children with those never breastfed (Hediger *et al.*, 2001; Toschke *et al.*, 2002) while others used a variety of groups for comparison. A review of these studies concluded that 'breastfeeding reduces the risk of child overweight to a moderate extent' (Dewey, 2003, p. 17), and the

AAP (2003) included a recommendation for breastfeeding in a recent policy statement on prevention of overweight and obesity.

A recent analysis of data from 177 304 low-income US children found a 'dose-response, protective relationship with the risk of overweight' and the duration of breastfeeding for non-Hispanic white children (Grummer-Strawn & Mei, 2004, p. e81). A feature of this study is that the authors examined the variation in the standard deviation of the BMI rather than variation in the mean and found simultaneous reductions of both over- and underweight for breastfed babies. The latter observation is of interest with reference to the absence of a population study investigating associations between faltering growth and breastfeeding. Non-Hispanic black and Hispanic infants did not show the same association between breastfeeding and risk of overweight/obesity as white babies (underweight figures are not broken down by ethnicity). The authors speculate that this may be as a result of other lifestyle factors known to influence obesity, or to differences in breastfeeding exclusivity or patterns of solid feeding, or even in a different use of formula. For example could white mothers be 'more insistent that their infants finish off a predetermined quantity of formula' (p. e85)? As with the effects of 'breastfeeding style' (see below); it appears necessary to investigate patterns of bottle-feeding ('bottle-feeding style') in order to understand patterns of infant growth.

The issue of childhood obesity has attracted attention in the news media as well as the medical press, and may be a concern for parents when babies are weighed, although no reference to this was found. Population correlations are little help in assessing whether the high recorded weight of an individual breastfed baby should be of concern with regard to later obesity, or, more importantly, whether there is an intervention which would decrease the chances of later obesity or morbidity. One commentator has emphasized that 'it is generally not advisable to attempt to limit the intake of an overweight infant' except of solids and juice (Dewey, 2003, p. 11), while the AAP stresses the desirability of 'early recognition' (AAP, 2003, p. 427). It is unknown how such suggestions will affect community practitioners and parents in the UK.

In assessing adult obesity and overweight, BMI is used, and the AAP (2003) suggests the paediatric use of BMI. BMI charts for children under the age of three are not in use in the UK, and the limits of acceptable BMI in children have yet to be well defined (White *et al.*, 1995). The intention is that data being collected and analysed to create the forthcoming WHO growth chart will be used to create a BMI reference and that these will be available by 2006 (de Onis & Victora, 2004). It remains to be seen whether WHO charts will be used in the UK.

The relation between the height and weight centile has been proposed as 'a more practical tool for community use' than BMI (Hulse & Schilg, 1996). A UK study in which 42 dieticians were asked to calculate the ideal weight for height of children, by hand, found high rates of inter- and intraexaminer unreliability (Poustie *et al.*, 2000) indicating limitations of adopting such calculations for assessing the likely meaning of any weight or other growth measurements of concern.

Conditional charts/thrive lines

In order to refine the weight chart as a clinical tool and enable more precise interpretations of weight patterns, conditional growth charts and 'thrive lines' have been developed. A conditional chart was based on growth data of a cohort in Newcastle, and aimed to provide a chart which used easily identified falls of one or two standard deviations (Wright *et al.*, 1998). There is no record of how widely this is used in UK practice.

The idea is further developed with 'thrive lines' (CGF, 1996), printed on acetate, which can be laid over the growth chart. For two weights, the overlay indicates whether the change is greater or less than two standard deviations, that is, whether or not the weight should trigger a referral (Cole, 1997). The instructions state that these work 'best for measurements taken about 4 weeks apart' and should not be used for time periods of less than 2 weeks (CGF, 1996). Fry (2002) asserts that one-third of practitioners use these, but does not state a source, or whether these practitioners are health visitors, or doctors to whom children are referred. No study has been iden-

tified in which the rate of referral when thrive lines were used was compared with using the UK90 chart alone. Such a tool encourages treating weight deviation as the absolute criteria for referral, de-emphasizing reliance on other clinical signs, attention to the whole baby, and the whole feeding experience. Davies (2000), a consultant, remarks:

My outpatient clinic is frequently attended by children referred because of abnormal weight [...] but not prompted by any particular [clinical] concern. [...] There is nothing wrong with the infants but the parents are invariably very anxious – a problem created out of nothing. (p. 201)

This implies that practitioners have difficulty identifying cases needing referral, as well as difficulty in communicating to parents the reasons for investigations.

Communication of results to parents and consultation

In developing countries mothers' understanding of growth charts has been explored (Ruel *et al.*, 1990; Senanayake, 1997). Morley attributes part of the lack of success of growth monitoring to failure to give adequate consideration to the fact that 'even the simplest chart is difficult to understand' (Morley, 1993, p. 98; Morley, 1996; Meeghan & Morley, 1999): even doctors may struggle with the graphs (Morley *et al.*, 1991). In the UK, graphical literacy and how it may impact on the understanding of the growth chart, by either health visitors or parents remains unexplored. Mosely & Mead (2000) write to refresh graphical understanding for nurses, starting with basics, but do not discuss growth charts. A review for teachers illustrates the range of concepts which need to be in place when interpreting graphical information (Friel *et al.*, 2001). While health professionals use charts on a daily basis, for first time parents they are new. Although seductively visual and seemingly self-explanatory, centile charts map weight gain trajectories – a concept which may need refreshing for even the most numerate parent. The notes supplied in the current personal child health record refer to best practice in measuring and plotting, with guidelines for when professionals should refer, and do not provide a general introduc-

tion to the chart and its interpretation likely to be useful to parents (CGF/RCPCH, 2004).

As well as understanding charted weights, a health professional needs to be able to convey what is indicated. No written material which discusses ways of explaining growth patterns to parents has been found. Nor is there a discussion of how health visitors might convey information that frequent weighing is not needed for healthy babies, and may over-emphasise minor fluctuations.

Approval of the growth pattern may be expressed by health visitors when weight conforms to the centiles, implying that fluctuations off the line are of concern. Olin Lauritzen & Sachs (2001), in clinic observations and interviews with Swedish and English mothers, found that weighing encounters encouraged mothers to see their baby's weight and health in relation to the norm of the chart. One mother told how 'instead of thinking that he is thriving... you become fixated on figures and graphs' (p. 509). Some women interviewed by Dykes & Williams (1999) found the 'visual display of weight... worrying [when] the babies were not progressing steadily along their centile' (p. 236); they were more likely to abandon breastfeeding early than mothers with a more holistic assessment of development. Many women may introduce formula supplements in response to perceived weight difficulties without consulting health visitors – thus anticipatory guidance is indicated.

The parent-held child health record does not give information to parents on frequency, or issues such as variations in recorded weight because of time of day, relation to a feed, etc. It states that 'A normal growth curve is one that always runs roughly on/parallel to one of the printed centile lines' (CGF/RCPCH, 2004, p. 38C). (This may be intended to relate to length/height, but this is not clear.) Information that there are normal patterns of growth, such as catch-down, which involve deviation from centiles could usefully form part of the initial explanation of weight monitoring given by health visitors. Discussing such issues with parents and supporting longer weighing intervals might need to involve restructuring clinic contacts (Fulford, 2001). Developing and evaluating a simple guide to interpreting weight charts for parents could

prove a valuable endeavour, although, in view of the complexities discussed here, a challenging one!

A cost analysis study of child health surveillance found, at the 6–8 week check, that just over 2 min was spent talking about feeding, indicating, at best, a superficial discussion (Sanderson *et al.*, 2001). Fulford (2001) describes dissatisfaction of health visitors themselves with drop-in clinics which were ‘rushed’, and ‘often babies were just weighed’ without time for ‘meaningful consultation’ (p. 386).

Interventions

Health professionals need to balance messages about the importance of adequate growth (bearing in mind all the complexities in assessing this) and the importance of breastfeeding. In the UK cultural setting where bottle-feeding with infant formula is seen as normal (Renfrew *et al.*, 2000; Dykes, 2003a, 2003b), UK mothers perceive formula as benign and its use as part of normal progression (Shaw *et al.*, 2003). Breastfeeding is framed as having ‘advantages’ rather than providing the measure against which infant formula is judged (Wiessinger, 1996). A growing list of studies provides evidence that there are immediate and long-term differences in health outcomes between breastfed and never breastfed babies (Heinig & Dewey, 1996; Nicoll & Williams, 2002), while a recent review revealed the paucity of research evidence on safety of formula-feeding (Renfrew *et al.*, 2003); this has not passed into popular understanding.

Supplementation with formula milk

During clinic participant observations, Mahon-Daly & Andrews (2002) saw that ‘simply falling off the percentile trajectory was often a lone reason for breastfeeding to be discouraged’ by health visitors, and mothers were ‘encouraged to bottle feed almost for their babies [sic] safety’ (p. 68). Smale (1996), who studied 10 years of contacts between mothers and a volunteer breastfeeding counsellor, found that ‘the bottle appeared to be the first line of defence for medical advisors, against weight gain problems’ (p. 219). The message mothers receive appears to be that only solution to faltering of charted weights relative

to the centiles is the introduction of formula and that breastfeeding is an extra which can be dispensed with in view of the imperative for the baby to put on weight.

Some infants will require supplements, but Renfrew *et al.* (2003), in a major evidence review, found that there is ‘insufficient research to guide practice in making decisions about which babies may genuinely need additional feeds’ (p. 43). This lack leads to a tension for professionals between the need to support women’s trust in the biological system of breastfeeding, and the need to ensure baby well being (Brown, 2000). The possibility of a threat from poor weight is likely to be more evident in our culture than any threat of formula-feeds. In some cases where growth is of concern, supplementation with the mother’s own expressed milk is an alternative option (Powers, 2001), although where the mother doubts her own ability to sustain her baby, this may require intensive support.

Breastfeeding interventions

Renfrew *et al.* (2000) emphasise that establishing effective and pain-free feeding will prevent many breastfeeding difficulties, including poor weight gain. Vinther & Helsing (1997), in a WHO manual for health workers, state that rather than supplementation, what needs to be addressed if the baby is slow to gain weight, is the attachment and positioning and the pattern and duration of feeding. A good understanding of the physiology of breastfeeding may also be important in preventing a perception of insufficient milk and improving effective breastfeeding (Alexander *et al.*, 1994; Renfrew *et al.*, 2000).

Positioning and attachment

Various studies of interventions to improve positioning and attachment soon after birth have been conducted (Righard & Alade, 1992; Henderson *et al.*, 2001; Ingram *et al.*, 2002; Woods *et al.*, 2002a, 2002b; Labarere *et al.*, 2003), but no study was found which assessed such interventions when used with women whose babies’ weight was of concern. A number of

clinicians suggest that attention to positioning and attachment is crucial in ameliorating breastfeeding difficulties, including poor weight gain (Newman, 1996; Inch & Fisher, 1999; Powers, 1999, 2001; RCM, 2002).

Health visitors monitor routine weight and often provide first suggestions for interventions. However, the training they receive in practical breastfeeding skills has been deemed lacking (UNICEF UK Baby Friendly Initiative, 2002). Shaw-Flach (1998), a health visitor, comments on the deficit of practical breastfeeding skills within her profession. Ker (2002) conducted qualitative interviews with 25 breastfeeding women who generally did not perceive breastfeeding help as within the role of the health visitor. Referrals of babies whose weight is of concern in the UK are currently made to paediatricians. If breastfeeding difficulties are contributing to poor weight gain, which the mother's own health visitor is unable to address, there is no system of specialist breastfeeding evaluation routinely available (Renfrew *et al.*, 2000), although in some areas there may be a midwife, a specialist clinic or lactation consultant who give specialist support (Inch & Fisher, 1999; Brown, 2000).

Breastfeeding style

Breastfeeding 'style' is a domain of behaviours such as frequency of feeding, duration of feeds and exclusivity (Sachs *et al.*, 2005). Flexible feeding patterns responsive to infant cues are suggested as having a positive effect on the effectiveness of breastfeeding (Renfrew *et al.*, 2000). Recent work has shown that breast milk fat composition varies throughout an individual feed and between feeds throughout 24 h and is related to interfeed interval. The shorter the interval, the higher the fat content of the milk at the start of the next feed (Daly & Hartmann, 1995a, 1995b; Hartmann *et al.*, 1996; Mitoulas *et al.*, 2002). Differing milk storage capacities between women imply different physiological limits to flexibility for mothers to increase the length of this interval.

Increasing the number and frequency of feeds are practices suggested as interventions in cases of poor weight gain (Newman, 1996; Powers, 1999, 2001) but the evidence that these work is from clinical observa-

tion rather than randomized or controlled trials (Powers, 1999). Blisset *et al.* (2002) include in a general discussion of interventions for faltering growth aimed at health visitors the recommendation that food be offered every 2 h. This is not explicitly related to breastfeeding, but is intriguing. Parents are often interested in spacing out milk feeds and 'breastfeeding took too long', which may relate to feed frequency, is a reason given by more than 10% of women who stopped breastfeeding in the first 4 months (Hamlyn *et al.*, 2002, p. 134). Explanation about the importance of feeding in response to baby's hunger cues rather than breastfeeding 'according to a clock-oriented bottle-fed regimen' is critical (Rowland *et al.*, 1981, p. 81).

Research investigating the individual physiology of women, their baby's growth and the impact of interventions such as supporting flexible breastfeeding patterns would be welcome.

What this review adds

The quality of professional and parental interpretation and assessment of charted infant weight gain has been little studied. The lack of evidence base and protocols for good practice for the use of formula supplements is noted. Interventions which change breastfeeding frequency or physical feeding position also rest on a scanty evidence base. The challenge of conveying information on infant growth patterns to parents is highlighted, as is the lack of quality information or training for health professionals in doing this.

Conclusions and recommendations

This review of the practice of weight monitoring of breastfed babies in the UK has brought together a number of issues from a wide variety of disciplines. Current understanding of different growth patterns and growth problems as they relate to breastfed babies have been explored. Interpretation of the growth of an individual baby relies on a good understanding of the tools (Sachs *et al.*, 2005) and how they relate to what is known about the growth patterns of breastfed babies. Suggestions have been made throughout of a number of areas which would be of particular interest for further research. Population audits of the proportion of babies identified as caus-

ing concern either to parents or to health visitors would be useful, along with documented case studies of interventions and outcomes. Qualitative studies investigating parental understanding of charted infant growth and relation to confidence in breastfeeding could provide crucial insight.

Formula supplementation is likely to continue to be used as an intervention for infants in the UK whose growth is of concern. Currently there is little to guide recommendations for appropriate amounts and duration of supplementation. A sample care plan for re-transitioning to breastfeeding would be a useful addition to the literature. Case studies and larger studies of interventions which aim to improve breastfeeding technique or advise on frequency are needed. Such interventions are offered to some women in the UK – depending on their location and on the chance of meeting a professional who can offer this. Faith in their efficacy varies from practitioner to practitioner and documentation of their outcomes is scarce.

Although breastfeeding is a major health recommendation, a universal minimum level of practice capability has not been set for the professions. Nor are there explicit referral pathways within health authorities. This should be remedied.

The Hall report (Hall & Elliman, 2003) is widely, possibly universally, used in community practice. A companion manual with a more in-depth discussion of issues of interpreting infant growth for community professionals would be an invaluable addition. Inclusion of sample protocols and decision diagrams could aid interpretation. A discussion of the merits of adopting a growth chart based on breastfed baby data, and if so, which chart, would benefit from being formally called, and from inclusion of a wide range of practitioners, including breastfeeding specialists (professional and volunteer). However, the introduction of a new chart should not be seen as sufficient unto itself; research needs to be undertaken as to what information could usefully accompany any chart to aid parental understanding of the charted growth curve of their child.

Weight monitoring offers a seemingly simple method of tracking the well-being of infants; however, the tools used, technical practice and interpretation all need to be of a good standard. Attention to

elements covered in this, and the companion review (Sachs *et al.*, 2005), offer the chance for routine weighing to offer good detection of babies of concern, and robust support for breastfeeding.

Our current understanding was compared by Sachs *et al.* (2005) to standing on a hill in fenland – some 'islands' of firm ground are visible, but the connections between these islands are often shrouded in low-lying fog, with speculation and assumption filling in the contours between. This review aims to map what is known and to suggest where paths might be constructed, to ensure greater clarity for future professional practice and for parental understanding.

Recommended topics for future research, audit and consideration:

Audits of practice, including: evaluating rates of appropriate referrals made for weight gain issues in clinical practice; changes in referral rates when 'Thrive Lines' are used; rates of formula supplementation in response to faltering growth; and outcomes of supplementation.

Re-evaluation of notes for parents on issues of expected infant weight gain patterns. Particular consideration should be given to how to present the pattern of the growth curve exhibited by breastfed babies.

An evaluation of the effects of using the 'Breast from Birth' chart for breastfed babies in comparison with the UK90.

Creation of a standard teaching package for health visitors on weighing practice.

A study evaluating an improvement in positioning and attachment of the baby at the breast as an intervention in cases of faltering growth.

An observational study examining relationships between 'breastfeeding style', breastfeeding technique and growth patterns.

Development of a protocol for assessing infant growth and using appropriate interventions, which includes interventions centred on improving breastfeeding effectiveness as well as others.

Acknowledgements

The authors are grateful to two anonymous peer reviewers whose comments on an earlier draft were very useful.

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