

Author's version pre-publication.

“Breakfast, lunch and dinner”: attitudes to infant feeding amongst children in a Scottish primary school. A qualitative focus group study.

***Health Education Journal* 2004; 63(1), 70-80.**

¹Bridie Russell
Health Visitor

²Helen Richards
Clinical Research Fellow

³Anni Jones
General Practitioner

²Pat Hoddinott
Clinical Research Fellow

1 Community Base, Town and County Hospital, Cawdor Road, Nairn IV12 5ED

2 Highlands and Islands Health Research Institute, University of Aberdeen

3 Highlands, Island and Grampian Primary Care Research Network

Address for correspondence

Ms Bridie Russell : Community Base, Town and County Hospital, Cawdor Road, Nairn IV12 5ED

Tel: 01667 452618

Fax: 01667 454479

email: Bridie.Russell@hpct.scot.nhs.uk

Word count (main text) 3613 words

Abstract

Objective: To describe the knowledge, attitudes and beliefs about infant feeding amongst a group of Scottish primary school children.

Design: Qualitative focus group study.

Setting: A single primary school which serves a mixed socio-economic area in the north of Scotland.

Method: Parents gave demographic details about their family, and information about whether their children had been breastfed. Twenty three children, aged 5 and 6, took part in 3 focus groups which were conducted by 2 facilitators, according to a predetermined topic guide. Focus group data were supplemented with analyses of children's drawings and with fieldnotes.

Results: Children generally spoke of and drew pictures of bottle-feeding. Their lack of everyday language for breastfeeding suggested that breastfeeding was not a 'taken-for-granted' activity. The repeated reference to adult meal patterns and to equipment suggested that the children have a mechanistic and confused idea of what breastfeeding involves. Their difficulties conceptualizing night feeds and feeding in public places suggested that the children viewed breastfeeding as a private activity, permissible only in certain contexts. Children had vivid recall of TV images of infant feeding.

Conclusions: Despite the observation that breastfeeding was not generally perceived as a natural activity, our findings suggest that primary school children are interested in infant feeding and that they can be engaged in and educated about it as young as 6 years old. Larger studies are needed to further explore attitudes to infant-feeding.

Keywords: children, infant feeding, attitudes, education

Introduction

The health advantages of breastfeeding to both mother and infant are well documented and include protection of the infant against gastro-enteritis¹, respiratory infection² and diabetes mellitus;³ and protection of the mother against pre-menopausal breast cancer⁴ and ovarian cancer⁵. The economic advantages of breastfeeding to the National Health Service (NHS) are increasingly recognised: the cost to the NHS in Scotland of gastro-enteritis associated with babies being fed artificially, or being breastfed for less than 13 weeks, was £3.82m annually⁶.

The World Health Organisation recommends that all babies are breastfed until the age of 6 months⁷ yet within the developed world, breastfeeding rates vary dramatically between countries. Rates are high in Scandinavia (in Norway 97 per cent of babies are breastfed at 1 month old, and 88 per cent are still being breastfed at 3 months⁸), and low in the UK (in Scotland in 2000, just 63 per cent of women initiated breastfeeding and 22 per cent of those had stopped by 2 weeks⁹). Breastfeeding rates were particularly low among younger women, women from manual social classes and those who have left full time education early.

In 1993, the Scottish Diet Report¹⁰ set a target to increase the proportion of mothers breastfeeding at 6 weeks from 30 per cent to over 50 per cent by 2005. More recently, this target has been restated in Scottish Health policy reports^{11 12}. However, there is no general agreement about how those targets can be met. Traditional information-giving approaches, such as providing leaflets, have not been shown to be effective at increasing breastfeeding rates¹³. They do not take into account lay values and beliefs which influence decision making. A study of women's attitudes to breastfeeding in London concluded, "*The decision to initiate breastfeeding is influenced more by*

embodied knowledge gained from seeing breastfeeding, than by theoretical knowledge about the benefits.” ¹⁴.

It is increasingly recognised that exposure to breastfeeding and education about infant feeding in general should start at school ^{15,16}. Most research into the education of children about infant feeding has been carried out on teenage populations and has shown that teenagers’ exposure to breastfeeding is limited ¹⁷. Previous experience of observing breastfeeding and having been breastfed themselves were found to be positively associated with British teenagers’ choosing to breastfeed a future baby¹⁸, and in Canada, a television commercial was found to positively influence teenagers’ attitudes to breastfeeding ¹⁹. More recent research shows that whilst teenagers consider breastfeeding to be healthy and natural, bottle-feeding is thought to be more convenient and without the embarrassment associated with breastfeeding in public ¹⁶.

Little is known about the most appropriate or effective age to educate children about infant feeding. It has been suggested at breastfeeding conferences that educational programmes should start at primary school, at an age at which breasts are not yet a source of embarrassment. A number of UK initiatives have introduced the subject of infant feeding to young children ²⁰ ¹⁵ but we are unaware of any research which has investigated the attitudes of young children to infant feeding. We therefore set out to describe the knowledge, attitudes and beliefs about infant feeding amongst a group of Scottish primary school children.

Methods

A qualitative focus group study was carried out in a primary school in a seaside resort in the north of Scotland which has a population of approximately 12,000 people. The school has approximately 270 children and serves a mixed socio-economic area.

In Spring 2002, all 60 children in primary year 2 were invited to take part in the Nairn Breastfeeding Project, an annual breastfeeding workshop initiated and organised by BR, which is in its 4th year. For our study, the parents of all 29 children in one class were sent a questionnaire via their child, which asked about demographic details; names and ages of parents/guardians and their relationship to the child; age at leaving full-time education; information about infant feeding and their (study) child's experience of witnessing infant feeding. At the same time, parents were asked to consent to their child taking part in the study. The study sample consisted of 23 children, aged between 5 and 6 years (14 girls and 9 boys). Three focus groups, lasting an hour each, were carried out with groups of 7 or 8 children.

The focus groups were run according to a predetermined topic guide by a facilitator (BR) and an observer (AJ). Examples of topics discussed were: the reasons why babies get fed; how the mother would know when her baby is hungry; and how often and where the baby might be fed. To stimulate discussion, the children were asked to draw a picture of a new baby being fed, and then to talk about and interpret their drawings. The first half of the group discussions focussed mainly on children's general attitudes towards infant feeding; the reasons why babies are fed and the children's recollections of media images of infant feeding. Halfway through the focus groups, the facilitator introduced a volunteer breastfeeding mother and baby to the children, which allowed us to ascertain the children's 'live' reaction to witnessing breastfeeding. The

subject of breastfeeding was not raised by the facilitator until the mother and baby had been introduced. The discussions were tape-recorded and transcribed. Data obtained at the focus groups were supplemented with observational data, field notes and analyses of children's drawings.

Data were analysed as a 5 stage iterative process: development of a coding schedule, coding of the data; description of the main themes; linking of the themes; and development of explanations for the relationships between themes. Analysis was done manually and the Framework Approach ²¹ was adopted to organise and analyse the data. Most of the analysis was carried out by BR, and all authors were involved in the identification of themes and in checking the internal validity of the findings.

Quotations are given in italics, and the gender (m/f) and identification number of the child are included in parentheses. Ethical permission for the study was obtained from the Highland Medical Research Ethics Committee.

Results

Parent Questionnaire

Of the 29 questionnaires sent to parents, 22 (75%) were completed and with 23 questionnaires (79%), parental consent was given for the child to take part in the study. The age range of the mothers who completed the questionnaire was 24 to 41 years (mean 32.1 years). Five mothers left full-time education under the age of 16 years, 14 between the ages of 16 and 19 years, and 3 after the age of 19 years. Twelve of the 22 mothers (54%) stated that they had breastfed at least one of their children, and the

proportion who reported having breastfed was higher in women who had remained until a later age in full time education (table 1).

INSERT TABLE 1 HERE

In answer to the question, “Do you think this child (the study child) has seen a baby being bottle fed?”, 18 mothers (82%) answered ‘often’, and 4 mothers (18%) answered ‘a few times’. In contrast, when mothers were asked a similar question about breastfeeding, 13 (59%) said ‘never’ or ‘a few times’, and 8 (36%) said ‘often’. One mother did not answer this question. Of the 8 mothers who reported that their child had seen breastfeeding often, 6 reported that they had themselves breastfed siblings of the child taking part in the study.

The focus groups

General attitudes to infant feeding

Insights into the general perceptions of infant feeding were obtained by asking the children to draw pictures of a new baby being fed, and to then talk about those pictures. Nineteen of the 23 children drew and described a baby bottle-feeding and just 3 drew and described a baby breastfeeding. One child’s drawing was ambiguous. All of the babies depicted breastfeeding were known to the child: they were either a relative of the child or a friend’s baby. Of the 8 children reported by their mothers to have seen breastfeeding ‘often’, only 2 described their picture as a baby being breastfed (figures 1 and 2) and 5 described bottle-feeding. Of those reported by their mothers on the

questionnaire to have seen breastfeeding 'a few times', 5 out of 6 depicted bottle-feeding.

INSERT DRAWINGS HERE

There was no common, taken-for-granted language amongst the children, associated with breastfeeding. The word 'breast' was not used at all. Breasts were referred to as "boobs", "boobies", "tummy" and "in there". The word "breastfeeding" was used 7 times before the breastfeeding mother was introduced and was also referred to as "do what they are doing", "getting a drink", "getting fed by the mummy's boobs", and "the baby sooks [sucks] the mummy's milk". Children seemed more comfortable miming the action of breastfeeding than verbally describing it.

Children's interest in breastfeeding seemed to be linked with other recollections: one boy remembered a breast pump his mother had used and said, "*Little special thing, little pump... sucks milk out.*" (015) Another had been told by his mother about a "tablet" to take "*if you don't want your milk.*" (018)

Reasons for feeding a baby and timing of feeding

Most of the children identified practical and physical reasons for feeding babies. Answers to the question of why babies are fed included, "*To keep them healthy.*" (04f), "*To make them grow bigger and stronger.*" (05m), and "*So they can look after themselves.*" (011f). None of the children mentioned the less practical and more emotional reasons for feeding a baby, such as holding the baby or as a means of comfort, nurturing or bonding.

The emphasis on practicalities extended to a rather mechanistic view of the timing of feeding. When asked about when a mother might decide to feed her baby, the children gave responses which suggested conformity to an adult pattern of eating and a strict timetable. For example several of the children mentioned that the baby would be fed "*Breakfast, lunch and dinner*" and one said that babies are fed, "*ten times a day*" (011f). As well as recognising that a baby would express hunger by crying and screaming, several children suggested that the mother would feed the baby, "*an hour after they have been sleeping*" (04f) and, "*At lunchtime, snack, teatime; at breakfast time they get milk*" (06f). Even when they were observing the volunteer mothers breastfeeding, most of the children spoke of the conformity to an adult feeding pattern and regularity of breastfeeding.

Night-time feeding was reported as problematic, even by the children who had previously talked about or drawn breastfeeding. All of the 5 children who talked of night-time feeding reported that the mother would have to "*get up*" to give her baby a bottle of milk. The 4 girls who responded to this question described the mother getting up, going downstairs and getting a bottle, despite having, according to their parents seen breastfeeding either 'a few times' or 'often'. One of those girls suggested: "*She might get the special thing to put it in the bottle and then the baby can drink*" (016f).

Sources of information about infant feeding

The children were asked whether they had seen babies being fed on television (TV) or in books. Six children had clear recollections of babies being fed on TV soap operas and in some cases they named the channel, the programme and the feeding mothers.

For example, one girl (022), described seeing a baby on Channel 5: *“Just a tiny wee one...She [mother] took off her bra, got this bra you don’t need to open and that’s how mummies feed...and the baby sooks [sucks] the mummy’s milk [does action]”*. ‘Casualty’, a TV hospital drama, was mentioned by another girl: *“It [the baby] was just born and it was crying and mummy was smiling and then they had to take it away to feed it. It got it [milk] from its bottle. It [the baby] went back to sleep and cuddled in”* (04). Boys too could recall seeing TV programmes showing babies being fed. One mentioned a BBC1 programme in which the baby was crying because, *“He was hungry and then it [the baby] got fed, breastfeeding... that one...fell asleep... it was nice and sleepy after that”* (05). Another gave ‘Coronation_Street’ as an example of a TV soap opera depicting a baby being fed: *“It [the baby] was sleeping then it started crying and the man and mummy... up the stairs, got it [milk] out a bottle from the fridge”* (07).

In addition to talking about TV images, 7 children (two of whom had also commented on TV images) recalled seeing a book about babies but they were less clear about whether the book depicted a baby being fed. One girl remembered a teacher showing her a book in which a mother was bottle-feeding a baby. Another described seeing a woman breastfeeding in a book and remembered the book’s title. A boy commented that his father had *“bought a book about babies... getting the bottle”*.

Infant feeding as a private/public activity

The children were asked about their views on suitable locations for feeding babies. A wide variety of locations were suggested, both private and public, including *“in a rocking chair”*

“house” “the swimming pool” and the local indoor soft play centre. One boy observed “If it was raining in the park, you would have to go back in your house and feed it [the baby] then.” (02)

Breastfeeding as a private/public activity

Once the volunteer mothers and babies had been introduced to the groups, the children were asked what would happen if those breastfed babies were out with their mothers and became hungry.

Some children appeared to be comfortable with the idea of breastfeeding in public places: one said that if there was a café in the shop, they would go to the café “and do it [breastfeed]” (06f).

Another suggested that if there was a seat in the shop, “they could just sit down and do what they are doing [breastfeeding]” (03f). When asked about being out in the park, this same child suggested, “They could find a seat and do it [breastfeed]”. However, some children who seemed generally accepting of breastfeeding, suggested that the activity might be problematic when the mothers were out and about. Several children reported that the mothers would need a bag in which to “put all the things” and “to pack some things for the baby to eat and drink, like its milk” (012m). Others said that the mother would have to go into a shop, buy milk in cartons and decant it into bottles. For example, one said that if the mother was in Tesco’s that she would, “just go and get some [milk] quickly and find a wee tub and put the stuff [milk] (01f). Another (04f) said the mother would “Buy a tub of milk and then you have got to pour it into a bottle”, adding that if in a café, “They [mothers] would buy them [babies] a little drink of milk”.

Responses to observing breast feeding ‘live’.

The subject of breastfeeding was not raised by the facilitator or observer until after the mother and baby had joined the group. Responses to witnessing a mother breastfeeding varied between the three groups. Group 1 was very animated, group 2 was less enthusiastic group 3 was earnest but muted. This variation probably reflected

the personalities and confidence of the children and the internal dynamics of the groups. Group 2 included a boy who not only showed no interest in the subject of infant feeding, but who also disrupted the discussion with repeated allusions to toilets and bowels.

When asked if they wanted to see how these babies got their milk, the children in group 1 responded very enthusiastically: two children said, “*Yes, double yes!*” (03f, 06f). All of the children in that group moved very close to the mothers and one girl said, “*I think I will have a closer look*”(06). The children seemed interested in the activity of breastfeeding, with one boy asking why “*that one [baby] has got his eyes closed when he is doing it*(05). A girl in group 1, who had previously contributed little to the discussion appeared much more interested when actually witnessing breastfeeding. She wanted to know how the mothers knew when their babies wanted milk if they were not crying. When asked what they thought breastfeeding might feel like for the mothers, responses ranged from “*tickly*”, or “*gentle*” to “*sore*”. Two boys suggested the baby might bite so it could be sore. When the children were asked about how they thought the mothers knew how to breastfeed, they expressed a wide range of ideas, including that they may have been told by a variety of other people, including, “*their Mum*”(04f), “*their aunts mum*”(03f), “*cousins*”(19f), and “*a friend*”(022f). Other suggestions were that they “*might have read a book*”(11f) or “*the doctor might tell them*”(015m).

Discussion

In response to the questionnaire, just over half of the mothers of the study children said they had breastfed, which is similar to the Scottish figure of 63% of women initiating breastfeeding⁹.

Although the numbers in the study were small we showed, as expected, higher breastfeeding rates in the mothers who had remained in full-time education longest. Most of the children were reported by their mothers to have witnessed bottle-feeding but not breastfeeding.

When asked to draw a baby being fed, most of the children, regardless of whether they had reportedly seen breastfeeding, depicted bottle-feeding. There seemed to be no common acceptable language amongst the children for describing breastfeeding and the children often resorted to miming the activity rather than verbally describing. The children revealed a mechanistic view of breastfeeding by referring to associated equipment and gadgetry, by emphasising the importance of a breastfeeding mother complying with adult meal patterns and by suggesting that night-time feeding is complex and problematic. Linked to the perceived difficulties of breastfeeding at night-time was a perception that breastfeeding is a 'private' or 'indoor' activity. Although breastfeeding was not described as 'normal', our respondents had detailed recall of depictions of breastfeeding on TV, they were interested in infant feeding and responded positively to witnessing breastfeeding.

This study has several weaknesses. First, the sample comprised children attending a single Scottish primary school and the themes which we have described may not be generalisable to other settings. Second, the study was limited by the inherent methodological problems of carrying out qualitative research with children, such as difficulties in accessing children's meanings due to differences in language and in the social worlds of children ²². In addition, our study found variations in the degree of co-operation of the children and in their maturity and ability/willingness to participate in the focus groups. However, anticipating those pitfalls at the outset, we took measures to minimise the disruption within the groups. Misinterpretations of data were guarded against by ensuring that there were 2 experienced facilitator² in each group. The

strengths of the study are that it has made an attempt to address an important area about which very little is known (the authors know of no similar published research). By using an unstructured qualitative approach, we were able to obtain the views of children without imposing an adult perspective on those views, as would have been the case if we had used structured interviews or questionnaires. The lead facilitator (BR) initiated and runs the Nairn Breastfeeding Project in the school, which facilitated access to the school.

The decision of whether to breastfeed is dependent on a complex interplay of social and cultural influences²³. An individual mother's decision about her method of infant feeding is generally made prior to conception or early in pregnancy⁹ and may be influenced by her previous exposure to breastfeeding¹⁴. Many children and adults have little if any exposure to breastfeeding^{17, 16} which may reflect changes in family structure and increased bottle-feeding in the older generation²³. The "norm" of artificial feeding is reinforced by media representations of bottle-feeding and by the sale of toy dolls with accompanying bottles²⁴.

Four overarching and related themes have arisen from this study which reflect a lack of exposure to breastfeeding. First, children more commonly depicted artificial feeding, and their lack of everyday language for breastfeeding suggests that breastfeeding was not a 'taken-for granted' activity for this group of children. Second, the repeated reference to adult meal patterns and to equipment and gadgetry suggests a mechanistic and somewhat confused idea of what breastfeeding involves. Third, the difficulties conceptualizing night feeds and feeding in public suggests that breastfeeding is viewed as a private activity, permissible only in certain contexts. Fourth, children appeared to have vivid recall of TV images of infant feeding (both bottle- and breastfeeding). Despite the observation that breastfeeding was not perceived as a natural activity,

our findings do suggest that primary school children are interested in infant feeding and that they can be engaged in and educated about it at an early age.

There is an increasing recognition in the research community and amongst policy makers of the necessity to change public attitudes to breastfeeding in order to improve breastfeeding rates ¹³.

Our study suggests that children's awareness of and knowledge about breastfeeding is limited and supports the assertion of health promotion organisations, such as the Health Education Board for Scotland ²⁵ that access to education about infant feeding amongst children should be improved.

We also suggest that given the positive responses of the children to witnessing breastfeeding in the focus groups, the subject of infant feeding can be successfully introduced to children as young as 5 and 6. Larger studies are needed to explore in more detail attitudes to breastfeeding and to formally evaluate school-based educational programmes about breastfeeding.

Funding

This study was funded by Highland Primary Care Trust Endowment Fund.

Acknowledgements

We would like to thank Highland Primary Care Trust and Highland, Islands and Grampian Primary Care Research Network for their support and Donaldal Morrison for her careful transcription. We would also like to thank the children, their parents and their teachers for giving their time.

References

1. Howie PW, Forsyth JS, Ogston SA, Clark A, du Florey C. Protective effects of breastfeeding against infection. *BMJ* 1990;**300**:11-6.
2. Wilson AC, Forsyth JS, Greene SA. Relation of infant diet to childhood health: seven year follow up of cohort of children in Dundee infant feeding study. *BMJ* 1998;**316**:21-5.
3. Mayer EJ, Hamman RF, Gay EC, Lezotte DC, Savitz DA, Klingensmith GJ. Reduced risk of IDDM among breastfed children. *Diabetes* 1988;**37**:1625-32.
4. Beral V. Breast cancer and breastfeeding: collaborative re-analysis of individual data from 47 epidemiological studies in 30 countries, including 50,302 women with breast cancer and 96,973 women without the disease. *Lancet* 2002;**360**:187-95.
5. Gwinn ML, Lee NC, Rhodes RH, Layde PM, Rubin GL. Pregnancy, breastfeeding and oral contraceptives and the risk of epithelial cancer. *J Clin Epidemiol* 1990;**43**:559-68.
6. Broadfoot M. Economic consequences of breastfeeding for less than three months. *New Generation Digest* 1995;**5**.
7. WHO/UNICEF. Joint Statement. Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. 1989. Geneva, World Health Organisation.
8. Gerrard A. Breastfeeding in Norway: where did they go right? *British Journal of Midwifery* 2001;**9**:294-300.
9. Hamlyn, B., Brooker, S., Oleinikova, K., and Wand, S. Infant Feeding Survey, 2001. 2002. London, Department of Health.
10. The Scottish Diet: Report of A Working Party TO The Chief Medical Officer For Scotland. 1993. Edinburgh, Scottish Office Home and Health Department.
11. Scottish Executive. Our Nation's health: A Plan For Action, A Plan For Change. 2000. Edinburgh, The Stationery Office.
12. Highland Health Board and Highland Council. Towards a Healthier Highland: Annual Report of the Director of Public Health. 2000. Inverness, Highland Health Board.
13. Fairbank L, O'Meara S, Renfrew MJ. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. *Health Technol Assessment* 2000;**4**.
14. Hoddinott P, Pill RM. Qualitative study of decisions about infant feeding among women in east end of London. *BMJ* 1999;**318**:30-4.

15. Health Promotions and Breastfeeding Strategy Group. Breastfeeding Strategy and Action Plan. 2002. NHS Grampian.
16. Ineichen B, Pierce M, Lawrenson R. Young people's views on breastfeeding. *British Journal of Midwifery* 1999;**7**:309-11.
17. Swanson, V., Carter, H., Power, K., Kaur, B., and Shepherd, K. Knowledge and attitudes to breastfeeding and bottle-feeding: a theoretically based assessment among secondary school pupils in Scotland. final report to the Chief Scientist Office. 2001. Forth Valley NHS Board.
18. Gregg JEM. Attitudes of teenagers in Liverpool to breastfeeding. *BMJ* 1989;**299**:147-8.
19. Friel JK, Hudson NI, Banoub S, Ross A. The effect of a promotion campaign on attitudes of adolescent females towards breastfeeding. *Journal of Public Health* 1989;**80**:195-9.
20. Norwich Community Health Partnership. Breastfeeding Matters: A pack of Educational Materials To Familiarise Young Schoolchildren with Breastfeeding. 1998 Norwich.
21. Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In Bryman A, Burgess RG (eds). *Analysing Qualitative Data*, London & New York: Routledge, 1996, 173-94.
22. Morgan M, Gibbs S, Maxwell K, Britten N. Hearing children's voices: methodological issues in conducting focus groups with children aged 7-11 years. *Qualitative Research* 2002.
23. Dykes F, Griffiths H. Societal influences upon initiation and continuation of breastfeeding. *British Journal of Midwifery* 1998;**6**:76-80.
24. Henderson L, Kitzinger J, Green J. Representing infant feeding: content analysis of British media portrayals of bottle-feeding and breastfeeding. *BMJ* 2000;**321**:1196-8.
25. Health Education Board for Scotland. Working Paper on Breastfeeding Education For Children and Young People. 2002. Edinburgh, Health Education Board for Scotland.

Table 1: Report of breastfeeding in relation to mother's age on leaving full-time education

	Age at leaving full-time education (years)				
	<16	17	18	19	>19
Reported having breastfed n (%)	1 (20%)	6 (54%)	1 (50%)	1 (100%)	3 (100%)

Captions for figures

Figure 1: “The Mummy [is] sitting on the chair and the baby [is] getting breastfed.” (014f)

Figure 2 “Baby getting a drink from its mum....her boobs”

