

Chapter 3 Diet and nutrition

CASE STUDIES

Case study: malnutrition among children in Farimabougou, Mali

Dettwyler³¹ in 1992 described some of the 'intricate web of interacting factors' that contribute to child malnutrition in Farimabougou, near Bamako, Mali. Based on a sample of 136 children, her study indicates that relative poverty alone cannot completely explain variations in diet and nutritional status within the community. Other studies in Mali also indicate that 'rising income is not correlated with an increase in quantity or an improvement in the nutritional quality of the diet'. In each case of severe malnutrition, therefore, 'a variety of biological, social, and cultural factors' – *in addition* to low incomes – has contributed to the child's poor growth, a situation that she terms 'socio-cultural malnutrition'. These factors include:

- differences in maternal age, experience, competence and attitudes to child-rearing
- the support networks available to mothers and the breakdown of the extended family unit under the influence of the wage economy
- maternal illness, such as malaria or measles
- marital problems, family conflicts and the difficult position of women in a polygamous society
- decisions on how household resources are to be allocated
- traditional infant feeding practices, such as weaning as soon as the mother gets pregnant again, or letting children

themselves decide whether and how much they want to eat.

In one case, a 16-year-old unmarried mother with twins, living as a low-status foster child in another family's compound, was given little help by them with either infant feeding or childcare; neither was she supported by the father of her children. She resented the twins because 'they were a burden to her', and with two small children 'she had little chance of marrying'. As a result of these and other factors, the children were neglected and failed to thrive. In another case, a father spent most of his income on his moped and on clothes for himself and his wife, leaving little over to pay for the children's food.

Dettwyler thus pointed out that, although in some circumstances one factor – such as drought, famine or war – may be responsible for malnutrition, 'the vast majority of malnutrition in Third World populations does not have one primary cause'. Since 'all poor people are not the same', she warns against simplistic solutions of the problem. Poverty, however, does play a crucial role in the 'web of causation' of childhood malnutrition in Mali. Apart from having less money to spend on food for the children, a contaminated environment (due to the complete lack of sewage and garbage disposal) and inadequate primary health care both contribute to frequent childhood diarrhoea and other causes of poor health. Furthermore, in a situation of deprivation, ill, malnourished or stressed parents are less able to deal with the demands of child-care and to ensure adequate nutrition of their children.

Case study: urban obesity in The Gambia

Prentice⁵² in 2000 described the effects of demographic transitions, such as urbanization, on average body weight in The Gambia. In the rural areas obesity is almost unknown, and childhood undernutrition is a major problem. In contrast, in the new urban townships obesity and its associated diseases – especially Type-2 diabetes – have become increasingly common, with middle-aged urban women now showing over 30 per cent prevalence of clinical obesity. These two very different types of health problem – undernutrition and overnutrition – together impose a major economic burden on the country, as they do elsewhere in Africa. Explanations for this rise of obesity in The Gambia range from genetic to socio-economic theories. In particular, Prentice mentions how migrants to the city, as they enter the wage economy and become more affluent, tend to

make major changes to their diet (what he calls 'coca-colonisation'), and to their levels of physical activity. They begin to eat a higher proportion of fatty foods, 'fast foods' and cheap vegetable oils. Also, unlike in the rural areas, they no longer walk up to 10 km to their fields or draw water by hand from the wells and carry it on their heads, or work for 8 hours at a stretch before returning home. Instead, they now have the leisure time to watch television. Escaping from hard physical labor is seen as a badge of success, and exercise as 'an unwelcome reminder of a poorer past'. Furthermore, as elsewhere in West Africa 'fat is beautiful', a sign of wealth as well as of health (and especially of not having human immunodeficiency virus [HIV]/acquired immune deficiency syndrome [AIDS]). For all these reasons, he suggests that convincing people to lose weight in this situation will be difficult to do.

Case study: beliefs about food and diabetes among British Bangladeshis, London, England

In two studies, in 1998 and 2000, Greenhalgh and colleagues,^{11,21} studied beliefs about diet and diabetes mellitus among a group of 40 Bangladeshi immigrants in London. While some of these beliefs overlapped with the medical model, others were very different. The whole group recognized the importance of diet in diabetes control, and believed that one of the main causes of diabetes was too much sugar. They also blamed heredity, 'germs' and stress. In terms of foodstuffs, however, they divided them into two symbolic categories in terms of their perceived 'strength' (nourishing power), and 'digestibility'. Strong foods were perceived as energy-giving, and included white sugar, lamb, beef, *ghee* (derived from butter), solid fat and spices. Such foods were considered crucial to maintain or restore health, and essential for certain festive occasions. They were considered dangerous, however, for the old or the debilitated (including diabetics), for whom weak foods (such as boiled rice or cereals) were more appropriate. Raw foods, and those baked or grilled, were considered indigestible, as were all vegetables that grow under the ground. They were considered

unsuitable for the elderly, the very young or those who were very ill. Thus, the recommendation that diabetics should bake or grill their foods rather than fry them would not accord with their food beliefs. In contrast, molasses – a dark form of raw sugar, liquid at room temperature – was considered safe for diabetics to eat, and very different from lighter coloured white sugar, butter, *ghee* and solid fat, which was forbidden. The whole sample believed that the onset and control of diabetes depended on the *balance* between food entering the body and emissions from the body, such as semen, sweat, urine and menstrual blood. An excess of any of these emissions was believed to cause illness and weakness, as in diabetes. In the Bangladeshi community, because communal feasts, festivals and social occasions are common (and usually involve the consumption of sweets and rich foods), a calculated compromise between social obligations and dietary compliance had to be made by both diabetics and their families. Finally, the value of physical exercise and weight-reduction had little cultural meaning for the sample. In general, larger body size (but not obesity) was viewed as an indicator of more health, while thinness was a sign of less health.

Case study: beliefs about breast-feeding and weaning in a poor urban neighbourhood in Cairo, Egypt

Harrison and colleagues⁶⁰, in a study in 1993 of 20 mothers in Boulq El Dakrou, Cairo, found a range of beliefs about whether a woman could breast-feed or not. All the women aimed to breast-feed their babies well into the second year of life, but did not assume that ability to breast-feed was automatic. Successful breast-feeding was believed to require patience, time, a sense of responsibility, good luck, a healthy mental state and specific changes in diet and behaviour. They cited many reasons why some women could breast-feed and others not. Some believed that adequate breast milk is a 'gift from God', and that only 'a lucky mother can breast-feed'. Others saw maternal emotional state as very important, since they believed that unhappiness turns the maternal body and its breast milk 'hot', and that this 'sadness milk' or 'grief milk' could cause diarrhoea in the infant. Thus, some mothers going through a stressful time would express much of their milk manually and discard it. In contrast, several would increase their breast-feeding if the baby was ill. The child

itself was believed to influence the amount of milk that was available; certain children were seen as more 'blessed', a characteristic that ensures a plentiful supply of breast milk. Nursing another woman's baby of the same age as one's own was also common in this community, as elsewhere in Egypt. This act had considerable symbolic significance, creating a quasi-kinship relationship between the women and babies involved and resulting in a lifetime prohibition against marriage between children breast-fed by the same woman. There was also a range of beliefs about when to wean the infant. Many based their decision on the infant's developmental milestones, such as when it had all its teeth, or was able to walk or eat adult food. Others cited maternal illness, pregnancy, employment outside the home, medical advice and the use of oral contraceptives as reasons to stop breast-feeding. Seasonal and religious factors also had an influence on when to wean; some mothers preferred summer to winter, some stopped breast-feeding because they had decided to fast during *Ramadhan*, while others avoided *Muharam* (the first month of the Islamic calendar), which was thought to be an unsuitable time for weaning.

Case study: breast-feeding versus bottle-feeding in London, UK

Jones and Belsey⁶³ in 1977 surveyed 265 mothers of 12-week-old infants in the London Borough of Lambeth. Sixty-two per cent of the mothers had attempted to breast-feed (compared with 16 per cent in Dublin, 39 per cent in Newcastle and 52 per cent in Gloucestershire). The different communities showed different rates of breast-feeding; British 58 per cent, African 86 per cent, West Indian 84 per cent, Asian 77 per cent, European 59 per cent, and Irish 64 per cent. The ethnic background of the mothers was an important influence here, since in many communities breast-feeding was the accepted norm. Several reasons were given for not breast-feeding, especially because they 'disliked the thought of breast-feeding'; 54 per cent of

bottle-feeders said this, while 44 per cent thought bottle-feeding was more convenient since it required less privacy than breast-feeding. Only 13 per cent of the bottle-feeders thought that the method they had chosen was the healthiest for the baby, compared with 85 per cent of the breast-feeders. Social, as well as ethnic factors were important in the choice of feeding technique, though the two were related; mothers were more likely to continue breast-feeding after 6 weeks if they had friends that had breast-fed. African and West Indian mothers more often had friends that breast-fed successfully than mothers in other ethnic groups, as did women in the upper socio-economic classes. Little evidence was found that either antenatal or postnatal medical advice affected the type of feeding chosen by mothers.

Case study: infant feeding practices in Glasgow, UK

Goel and colleagues⁶⁴ in 1978 studied the infant feeding practices of 172 families from various communities in Glasgow. These included 206 Asian, 99 African, 99 Chinese and 102 Scottish children. It was found that, after arrival in the UK, most immigrant mothers did not want to breast-feed their babies. Those immigrant children born outside the UK were more likely to have been breast-fed than those born within the UK; 83.7 per cent of Asian, 79.2 per cent of African and 80.9 per cent of Chinese children born abroad had been breast-fed. Ninety-nine per cent of the Scots children had been exclusively bottle-fed. The commonest reasons given by the immigrant mothers for not

breast-feeding were embarrassment, inconvenience and insufficient breast milk. Two-thirds of the breast-fed Asian children were fed for at least 6 months and only 5 per cent of the African babies were breast-fed for more than 1 year, but Chinese mothers often breast-fed for 1–3 years, and many of their children were not given solid foods till they were 1 year or older. Asian children born in the UK usually had solids by 6 months (but were given these at 1 year if they had been born abroad). Both African and Scottish children were given solids at 6 months. The authors suggest that all Asian children be given vitamin D supplements, since 12.5 per cent of the Asian children in the sample were found to have rickets.

Case study: feeding patterns in Chinese children, London, UK

Tann and Wheeler⁶⁵ in 1988 assessed feeding patterns and growth rates of 20 London Chinese children, aged between 1 and 24 months, over a period of 6 months in 1988. All the families had originated from the New Territories, a rural area of Hong Kong. With one exception, all the children were bottle-fed, and soft canned food and rusks of the British type were introduced at between 1 and 6 months. Subsequent to this, at 6–10 months, most mothers introduced *congee*, a traditional Chinese weaning food prepared by boiling rice in large quantities of watery meat broth. Soft, boiled rice was introduced at about 10 months, and then gradually the full range of Chinese foods was introduced. The mothers had chosen not to breast-feed mainly because of the 'inconvenience', although in Hong Kong nearly 60 per cent of mothers wholly or

partially breast-feed their children. Most of the sample believed that milk quality was affected by the quality of the food eaten by the mother after delivery; in Hong Kong, Chinese mothers were usually confined at home for 30 days after delivery, during which nutritious (i.e. meaty) food was served to them by female relatives – a process known as 'doing the month' (see Chapter 6). In London they could not afford such a luxurious post-confinement period, as they had to get on with work or household chores. As a result, they believed they were not sufficiently well nourished to produce good milk for the babies. Meat served in hospital after delivery was not considered nourishing enough, since it should have been cooked in a traditional way with special spices, herbs and wines. The authors found that despite this, all the Chinese children in the sample were well nourished. The role of 'hot-cold' foods in the mother's diet has been mentioned previously.

Case study: infant feeding practices of Pakistani mothers in England and Pakistan

Sarwar⁶⁶ in 2002 compared the infant feeding practices of two groups of Pakistani mothers –one living in Nottingham, England, the other in Mian Channu, Pakistan. Despite having very similar socio-cultural backgrounds, there were marked differences between the two groups. In Pakistan, 73 per cent of the mothers chose breast-feeding as the initial method of feeding, compared with only 24 per cent in England. Overall, breast-feeding was much more commonly practiced in Pakistan, and for a much longer period, compared with England, where bottle-feeding predominated. The reasons for this shift included the easy

availability of artificial feeds in England, peer pressure, and the fact that the mothers felt that exclusive breast-feeding restricted their lives, and was too demanding. While both groups of mothers commenced weaning their babies between 3 and 4 months with rice, cereals and eggs, in Pakistan this progressed to fruit, vegetables and family foods, but in England it moved on to fruit, vegetables, meat, and convenience foods (some of them very sweetened). The study indicated, therefore, how migration – as well as changes in social and economic context – are influencing mothers' decision whether to breast-feed or not. If they do decide to breast-feed, it also influences for how long they will continue this feeding.

Case study: perceptions of breast-feeding in Northern Ireland, UK

Stewart-Knox and colleagues⁵⁷ in 2003 studied a sample of mothers in Northern Ireland, and their reasons for not breast-feeding. The study had important implications, since Northern Ireland has the lowest rate of breast-feeding in the UK, as well as being low compared with many other regions in Europe. The mothers described a series of barriers to breast-feeding, which included: (1) it tied them to the home, and restricted their freedom of movement; (2) they felt embarrassed to breast-feed, even in the presence of family and friends; (3) they found that going back to work made breast-feeding almost impossible; (4) they felt that breast-feeding required prolonged unpaid maternity

leave, and this also made them feel more dependant on others; (5) they often lacked practical and emotional support from family members and partners; (6) they perceived breast-feeding as tiring, and associated with difficulty in establishing a routine; (7) they complained about a lack of provision in public buildings for nursing mothers; (8) they felt that promotion materials for breast-feeding were unrealistic, and often made them feel guilty or pressurized; and (9) they felt that all these barriers meant social isolation for a woman who chose to breast-feed. The authors place all these beliefs and attitudes in the context of the changing role of women in society. This major cultural shift has meant many more women in the workplace, and a higher value being placed now on their freedom and independence.