SOME SOCIAL ASPECTS OF INFANT FEEDING

BY

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This investigation was originally undertaken in an attempt to discover if there was any social difference in breast feeding in various parts of the Borough of Ilford.* Later the scope was widened to include an effort to find out if the stress of air-raids made any difference, and, finally, to corroborate other work that has shown the gradual decline in breast feeding that has taken place since the war of 1914-18, and its relation to the progressive development of infant welfare centres.

The method used was to classify the information given on the cards that are filled in by the health visitors employed by the borough on their routine visits. This meant that the type of feeding in the first fortnight or three weeks could not be considered as the health visitor does not call until after that period. The details relating to this visit are called 'first visit figures.' The method has the disadvantage that a certain unknown error occurs as a result of incorrect or equivocal filling in of the cards by the health visitor, sometimes due to misinformation on the part of the mother. As an example of this, the misuse of the term 'weaning' might be cited. Instead of being used to denote that the infant was being taken off the breast, it was found by perusal of the cards that often the term meant that the infant was being put on to a mixed diet, either from the bottle or the breast. All information that was thus equivocal had to be discarded. The details relating to the sixth month was also investigated, and called the 'sixth month figures.' As the information on the cards is less definite at six months than on the first visit, much of the information could not be used, hence the 'sixth month figures' are always based on smaller numbers than the 'first visit figures.' For example, the nurse might not visit on the sixth month or the parent might not be at home then. If, by way of illustration, the information showed that dried milk was being used on the fourth month, and also on the seventh month, then it might safely be deduced that a similar type of feeding was in use on the sixth month. On the other hand, if the fourth and seventh months showed different methods of feeding, this information could not be used. An advantage of the method, however, is that there is no selection, as every infant in the borough is visited, with, I believe, the sole exception of the children of medical practitioners !

* A borough in Essex, on the outskirts of London, largely of 'dormitory' type.

To demonstrate the well-known decline in breast-feeding that has taken place, the earliest available cards were examined. These related to the year 1920. There were few of these cards, and only 136 could be used, although there were 1666 births in the borough in that year. In order to get figures that might be statistically significant the figures of 1920, 1921, 1922, 1923 and 1924, with 136, 138, 184, 255 and 455 cards respectively were added together, to get a more significant total of 1168 to compare with later years. For comparison the years 1930 and 1938 were chosen, the latter year being the last full normal period before the onset of the present war. These figures naturally relate to a period before the introduction of the national milk schemes.

FEEDING AT FIRST VISIT

(Percentages in brackets)

	BREAST	DRIED	LIQUID	CONDENSED	COMPLEMEN- TARY OR SUPPLEMENTARY	TOTAL
1920-24	1014 (87)	47 (4)	18 (1.5)	53 (4.5)	36 (3)	1168
1930	1537 (87)	66 (4)	23 (1)	60 (3)	86 (5)	1772
1938	793 (73)	183 (17)	18 (1.5)	18 (1.5)	81 (7)	1093

The table shows a decline of 14 per cent. from 87 per cent. breast-fed children in 1920-24, to 73 per cent. in 1938. It will be noted that the decline began after 1930. The place of breast milk was taken by dried milk. A drop in the use of condensed milk and a rise in complementary or supplementary feeding of little statistical significance will be noted.

FEEDING AT SIX MONTHS

(Percentages in brackets)

	BREAST	DRIED	LIQUID	CONDENSED	COMPLEMEN- TARY OR SUPPLEMENTARY	TOTAL
1920-24	372 (58)	116 (18)	41 (6)	75 (12)	33 (6)	637
1930	721 (63)	246 (22)	78 (7)	65 (6)	28 (2)	1138
1938	387 (44)	387 (44)	71 (8)	19 (2)	16 (2)	880

Once again the drop in breast feeding is noted, again of 14 per cent. from 58 per cent. in 1920-24 to 44 per cent. in 1938. The drop did not begin until after 1930. The place of breast feeding was taken by dried milk, the percentage of each in 1938 being identical, 44 per cent., but the consumption of condensed milk showed an appreciable decline, from 12 per cent. to 2 per cent.

The problem may be approached from another angle, that of the duration of breast feeding. The exact time of weaning could not always be ascertained from the cards, as often the particulars were concerned with the details relevant

SOME SOCIAL ASPECTS OF INFANT FEEDING 141

at the time of the visit only. This difficulty was tackled, perhaps in a rather awkward fashion, by calculating the percentage of those breast-fed at six months who were still breast-fed at ten months or over.

		BREAST-FED AT SIX MONTHS	WHOLLY OR PARTIALLY BREAST-FED AT TEN MONTHS OR OVER	PERCENTAGE
1920-24		405	146	36
1930		749	120	16
1938		403	24	6

It will be seen from these figures that the duration of breast feeding has diminished in a more dramatic fashion than has the incidence at birth and at six months. This is in accordance with common experience, for it is rare in Ilford to find a mother who breast feeds her child beyond nine months, whereas it appears from the earlier cards that it was then not unusual to find a child still breast-fed at eighteen months.

How do these figures compare with those given by Spence (1938)? As Spence remarks, the form of the particulars differs from investigator to investigator; furthermore, the figures relating to any single community in different years are not identical. Also, as will be shown later, there are social differences to be considered, and the fact that statistics from infant welfare centres cannot be compared with those obtained from domiciliary visits. Thus only a very rough comparison is valid. These results agree in that from 20 per cent. to 30 per cent. of children are bottle-fed from birth, but Ilford differs from the North in that 44 per cent. in 1938, and perhaps even more in 1940-41 (see below) are breast-fed at six months. (Spence states that not more than one-third of mothers breast feed their babies at this age.)

Other considerations

In view of this decrease in breast feeding it is interesting to compare various other changes that have taken place in the same period. These details have been calculated from statistics given in the Annual Report of the Medical Officer of Health. The first is the increased use of infant welfare centres. As the town has grown greatly since 1920 it is misleading to point to the increase in the number of, and attendance at, clinics. A more valuable figure will be the ratio of births to new attendances at clinics during the year. Thus in 1920 for every 100 children born in the borough there were 53 first attendances at centres. In 1938 for every 100 births there were 109 new attendances. (The fact that there were more first attendances than births is explained by the rapid growth of the borough, with an influx of children from elsewhere.) Furthermore, in 1920, each child attended on an average fourteen times during the year, whereas in 1938 each child came twenty-two times. Might this, and the

fact that cheap dried milk is obtainable at the centres be the main cause of the decline in breast-feeding? This is very doubtful, for each child in 1920 obtained on an average 20 lb. of dried milk at the clinic and only 11.3 lb. in 1938. It is possible that there may be a statistical error in this calculation, as, if there were a larger proportion of toddlers in 1938 as compared with 1920 the amount sold per child would be smaller, since toddlers do not require dried milk. I have no reason to suppose that there might be such an error, but cannot suggest any way of disproving it. As 'toddlers' clinics' were started early in 1938, and an attempt made to dissuade mothers from bringing their toddlers to the ordinary clinics, there might have been on the other hand a smaller proportion of older children in this year. Another picture might be constructed, by the fact that in 1920, for every child born in the borough, 10.5 lb. of dried milk were supplied, whereas the figure in 1938 was 12.3 lb.; but this figure does not disclose, as has just been shown, that in 1938 the clinics were more than twice as popular as in 1920, and probably means that the extra 1.8 lb. per child per year was purchased at the clinic instead of at the chemist. The distribution of condensed milk and free liquid milk has not been considered, for, as demonstrated earlier, the place of the breast has been taken by dried milk.

The other interesting feature is the decline in the infant mortality rate from 54 per 1000 live births (1920) to 36.7 (1938). It is a fascinating paradox that although nearly all are agreed that breast-feeding is superior to bottle-feeding as far as the health of the child is concerned, yet, when communities become more civilized bottle-feeding increases and the infant mortality rates decrease. No doubt the infant mortality rate is highest in communities where breast-feeding approximates to 100 per cent. Other factors are doubtless responsible for this apparent discrepancy.

In order to discover if there were any social differences in breast-feeding, two districts in Ilford of widely differing economic status were compared. One (called W.A.) is mainly a middle or lower middle class district. This might be demonstrated by the fact that in 1938 no dried milk was given free to any parent attending the clinic that serves the district. The other area (called I.L.) is mainly a working class district and 551 lb. of dried milk were given free to necessitous families at the district clinic during 1938. To obtain figures large enough to be of value the cards for the six years 1935-1940 were compared.

FEEDING AT FIRST VISIT
(Percentages in brackets)

	BREAST	DRIED	LIQUID	CONDENSED	COMPLEMEN- TARY OR SUP- PLEMENTARY	TOTAL
W.A.	549 (79)	89 (13)	3	7 (1)	48 (7)	696
I.L.	487 (79)	72 (12)	3 (0.5)	4 (0.5)	52 (8)	618

There was thus no significant difference at the first visit between the two districts.

SOME SOCIAL ASPECTS OF INFANT FEEDING

143

FEEDING AT SIX MONTHS

(Percentages in brackets)

	BREAST	DRIED	LIQUID	CONDENSED	COMPLEMEN- TARY OR SUPPLEMENTARY	TOTAL
W.A.	288 (51.5)	230 (41)	30 (5.5)	3 (0.5)	8 (1.5)	559
I.L.	171 (41.5)	201 (49)	16 (4)	18 (4.5)	6 (1)	412

From this table it will be seen that there is a greater decline in breast-feeding at the age of six months among the poorer mothers than there is among the better off. In both districts the percentage of mothers breast feeding their children at six months who still feed them at ten months or over is negligible, i.e. 2 or 3 per cent.

I have often felt that the poorer class mother, although she began breast feeding her baby as enthusiastically as the better-off parent, did not continue as well. Further facts regarding infant feeding were collected from the mothers attending the clinics of these districts. These numbers are naturally small (there were fifteen such clinics per week at that time in Ilford), but as the bottle feeding section of the community tend to gravitate to clinics for obvious financial reasons, these figures show up particularly well the tendency of the overworked and underfed working class mother to take the easier path and accept the amenities of free or cheap milk.

FEEDING AT CLINIC—FIRST VISIT (1938)

	WHOLLY BREAST	BOTTLE	COMPLEMENTARY OR SUPPLEMENTARY	TOTAL
W.A. . . .	90 (66)	31 (23)	15 (11)	136
I.L. . . .	53 (71)	15 (20)	6 (9)	74

From this table it will be seen that the percentage of breast-feeders attending the clinic is less than the percentage in the district as a whole. (The difference between the two districts is not statistically significant).

FEEDING AT CLINIC—SIX MONTHS (1938)

	WHOLLY BREAST	BOTTLE	COMPLEMENTARY OR SUPPLEMENTARY	TOTAL
W.A. . . .	39 (37)	59 (56)	7 (7)	105
I.L. . . .	19 (26)	48 (67)	5 (7)	72

These numbers are small, but in each case the percentage of breast feeders at the clinic is about 15 per cent. less than in the corresponding district, and at six months is 11 per cent. less in the poorer district clinic than in the better off

one. It appears that the degree of breast-feeding depends largely on prevailing social habit, and any individual practitioner can do little to change the tendency. The same medical practitioner (the author) attended both these clinics. This social difference prevails in spite of the fact that breast feeding is both cheaper and easier than bottle feeding. These figures also show that it is fallacious to accept the type of feeding at an infant welfare centre as evidence of the condition prevailing in the surrounding community.

Air-raids

In order to determine whether the stress of air-raids had any effect on the type of feeding the cards of babies born from April 1940 to March 1941, inclusive, were investigated. As there has been a considerable and irregular movement of the population during the period under review, it cannot be guaranteed that all these mothers and babies experienced the stress of heavy air-raids; if they did not, they were under the strain of evacuation. Their whereabouts, unless actually at home in Ilford on the occasion when the nurse called, are not necessarily stated on the cards. From careful perusal of 200 unselected cards it was apparent that 163, or 81.5 per cent. were at least on one occasion in Ilford during the months of heavy air-raids from August 1940 to March 1941, inclusive.

FEEDING AT FIRST VISIT

(Percentages in brackets)

	BREAST	DRIED	LIQUID	CONDENSED	COMPLEMEN- TARY OR SUP- PLEMENTARY	TOTAL
1938	793 (73)	183 (17)	18 (1.5)	18 (1.5)	81 (7)	1093
1940-41	608 (71)	144 (17)	10 (1)	8 (0.5)	81 (9.5)	851

FEEDING AT SIXTH MONTH VISIT

(Percentages in brackets)

	BREAST	DRIED	LIQUID	CONDENSED	COMPLEMEN- TARY OR SUP- PLEMENTARY	TOTAL
1938	387 (44)	386 (44)	71 (8)	19 (9)	16 (2)	880
1940-41	276 (46)	260 (43)	53 (9)	1	11 (2)	601

This evidence suggests that the heavy air-raids have had little effect on breast-feeding, except perhaps that the decline seems to have been stayed at the sixth month period.

Complementary and supplementary feeding

A small but nevertheless very steady increase in partially breast-fed infants is to be noted at the first visit of the nurse.

	PARTIALLY BREAST-FED	TOTAL	PERCENTAGE
1920-24 ..	36	1168	3
1930	86	1772	5
1928	81	1093	7
1940-41 ..	81	851	9.5

This rise compensates to a small extent for the decline in wholly breast-fed infants, as the following table will show.

	WHOLLY BREAST-FED (PER CENT.)	PARTIALLY BREAST-FED (PER CENT.)	WHOLLY AND PARTIALLY BREAST-FED (PER CENT.)
1920-24 ..	87	3	80
1930	87	5	92
1938	73	7	80
1940-41 ..	71	9.5	80.5

The value of this type of feeding is difficult to assess. If it is the first step toward early weaning it should be discouraged, but, on the other hand, if it means that infants who would otherwise be completely bottle fed receive some breast milk it should be encouraged, and complementary feeding may tide mother and child over a difficult period when breast alone does not seem to satisfy the infant.

Summary and conclusions

1. (a) A decline in breast-feeding of about 14 per cent. occurred in the Borough of Ilford between 1920 and 1938. The decline seems to have taken place after 1930.

(b) The infant mortality rate during this period has fallen from 54 to 36.7.

(c) The place of breast feeding has been taken by dried milk.

(d) The proportion fed on liquid milk has changed little.

(e) The use of condensed milk has declined.

(f) Complementary and supplementary feeding has increased.

(g) The duration of breast feeding in months has been very considerably curtailed.

(h) The distribution of dried milk at the infant welfare centres has, per child, diminished during this period, although the percentage of breast feeders is less at the clinic than in the surrounding district.

2. The mother in the poorer districts tends to give up breast-feeding at an earlier date than the better-off parent.

3. Air-raids and evacuation appear to have had little effect on the type of feeding.

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REFERENCE

Spence, J. C. (1938). *Brit. med. J.*, **2**, 729