

Breastfeeding and weaning practices in rural communities of Kelantan

Zulkifli Ahmad, Daw Win Kyi and Abdul Rahman Isa

Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kota Bharu, Kelantan

ABSTRACT

A survey of infant-feeding and weaning practices of 566 mothers, systematically sampled from 15 rural villages, randomly selected in the district of Tumpat, Kelantan was carried out. Almost all mothers (97.3%) breastfed their children, reinforcing the previously reported high incidence of breast-feeding among rural Malaysian mothers. One hundred and seventeen (21.3%) of the 551 children breastfed were also given mixed feeding with infant formulae as well. Weaning started before 4 months of age in 28.3% of the children and after 6 months of age in 12.8% of the children. The 3 most common type of food used in weaning were Nestum (45.0%), rice porridge or paste (42.6%) and wheat porridge or cakes (11.5%). Forty eight children (12.1%) discontinued breastfeeding once weaning was initiated. The main reasons for initiating weaning was mothers' perception that there was insufficient milk and that the child was always hungry (55.7%). Most mothers were also given advice by the health clinic staff on weaning, including the timing and the suitable weaning foods to give. All of the mothers were able to name at least one commercial weaning food product available in their community.

INTRODUCTION

Feeding practices during infancy are important determinants of future physical and mental well-being because of the rapid growth spurt and development of organs and tissues during the first year of life (Waterlow, 1992). They vary with socio-economic stratification and are regulated by a variety of factors such as education, customs, beliefs and taboos (Nagra & Gilani, 1987).

In communities undergoing social changes, the incidence and duration of breast-feeding decreased whereas bottle and solid feeding are introduced earlier (David, David & Ellozy, 1983). This is the case for Malaysia where the country is going through a rapid development phase and more women are joining the workforce. The pattern of supplementary feeding during the first 2 years of life is increasingly recognised as important determinants of malnutrition (Underwood & Hofvander, 1982)). Problems of nutrition during the weaning period are complex and the type of food employed depends on the resources within the locality under consideration (Fashakin & Ogunsola, 1982).

The aim of the present study is to investigate infant feeding and weaning practices in children up to the age of 2 years in a representative sample of rural communities in Tumpat, Kelantan. Tumpat was chosen as the study area because it is a rural district with one of the lowest socio-economic development in Peninsular Malaysia.

METHODS

The mothers were selected by households through systematic sampling of numbered houses from 15 rural villages in Tumpat. These villages were selected randomly from a list of rural villages in Tumpat. A mother was chosen if she has a child below 2 years old. If the mother has more than one child below 2 years old, then the questionnaire was directed towards practices for the youngest child. The questionnaire was designed to assess the breastfeeding and weaning practices of children under 2 years. The interviews were conducted in the local Kelantanese dialect by trained interviewers directed at the mothers. Follow up visits to the house were done if the mother was not available during the initial visit and a total of 566 mothers were interviewed.

Coding, computation and analysis of data was made using the Epi-Info software. The Chi-square test was used to determine the association between variables with level of significance set at $p < 0.05$.

RESULTS

Breastfeeding

The study included 566 mothers who had a child below 2 years old. All the mothers were Malays and Muslims. Almost all the mothers (97.3%) breastfed their child, which confirms previously reported high breastfeeding rate (more than 90%) among rural Malaysian mothers (Teoh, 1975; Balakrishnan & Hasbullah, 1977). There were 15 mothers who did not breastfeed their child at all. The breastfeeding pattern by mothers who have breastfed or are currently breast-feeding their children is presented in Table 1.

There were 282 children who were exclusively breastfed and 117 children on mixed feeding, giving a total of 399 children (72.4%) who were breastfeeding. The highest proportion of exclusively breastfed children were those less than 7 months of age, which ranged from 85 to 100 percent. The proportion gradually declined with age, the lowest (60.4%) were in children more than 12 months old. Except for the age group 1 month and under, there were more mothers who practiced exclusive breastfeeding than mixed feeding in all the other age groups.

Table 1. Breastfeeding pattern in children less than 2 years old, who were or currently breastfed in Tumpat, Kelantan

Age of children (months)	Breastfeeding only (%)	Breast and Bottlefeeding (%)	Stopped breastfeeding (%)	Total
1 and under	11 (35.5)	20 (64.5)	0 (0.)	31 (5.6)
2 - 3	23 (57.5)	11 (27.5)	6 (15.0)	40 (7.3)
4 - 5	44 (80.0)	5 (9.1)	6 (10.9)	55 (10.0)
6 - 7	35 (76.1)	8 (17.4)	3 (6.5)	46 (8.3)
8 - 9	18 (52.9)	8 (23.5)	8 (23.5)	34 (6.2)
10 - 11	36 (60.0)	9 (15.0)	15 (25.0)	60 (10.9)
12 - 24	115 (40.4)	56 (19.6)	114 (40.0)	285 (51.7)
All ages	282 (51.2)	117 (21.2)	152 (27.6)	551 (100.)

One hundred and fifty two mothers had terminated breastfeeding their child at the time of the study. The duration of breastfeeding for these children is shown in Table 2. Nearly half (42.1%) of the mothers stopped breastfeeding by 6 months. The reasons given by these mothers is shown in Table 3. There was no significant difference noted between male and female children. Insufficient breast milk and the mother working were the most common reasons, accounting for nearly half of the cases.

Supplementation and weaning

There was a total of 462 mothers (81.6%) who has weaned their child. The age of initiating weaning is shown in Table 4. The median age at the start of weaning was 4 months and the mean was 4.7 months. One hundred and twenty seven children (28.3%) started weaning before 4 months, 267 (59.3%) started between 4 and 6 months and only 56 (12.5% started after 6 months. The predominant reasons given by the mothers for initiating weaning were, mother not having enough milk, child was always hungry and advised by the health staff to wean at 4 to 6 months. There were only 15 mothers who gave other reasons and these included mothers becoming pregnant again, mother was sick and mother wanting to use contraceptives. Most mothers (82.8%) were given some advice on weaning by the health staff when their child was brought to the child health clinic. Most mothers (87.9%) also continued milk feeds after starting weaning. However, there were 48 mothers who ceased breastfeeding once weaning was started.

Table 2. Duration of breastfeeding among children who were terminated from the practice in Tumpat, Kelantan

Duration (months)	Male	Female	Total (%)
0 - 6	37	27	64 (42.1)
7 - 12	7	10	17 (11.2)
13 - 18	16	22	38 (25.0)
19 - 24	10	23	33 (21.7)
Total	70	82	152 (100.0)

Table 3. Reasons for terminating breastfeeding among rural mothers in Tumpat, Kelantan

Reason	Number	%
1. Insufficient milk	43	28.3
2. Mother is working	30	19.7
3. Mother is pregnant	24	16.4
4. Child is big	14	9.2
5. Infant formulae available	9	5.9
7. Inconvenience to mother	8	5.3
8. Child prefers instant formulae	7	4.6
9. Child staying with relatives	4	2.6
10. Child taking solid food	4	2.6
Total	152	100.0

Table 4. Age of children under two years when weaning was started in Tumpat, Kelantan

Age of children (months)	Male	Female	Number (%)
1 and under	18	25	43 (9.3)
2 - 3	55	29	84 (18.2)
4 - 6	134	133	267 (57.8)
7 -12	28	37	65 (14.1)
13 - 24	3	0	3 (0.6)
All ages	238	224	462 (100.0)

Nestum was a popular weaning food, chosen by 45% of all mothers as the first weaning food they had given their child. This was followed by rice porridge or paste (42.6%) and wheat porridge or cakes (11.5%). Nestum, which is a commercial food preparation was popular with these mothers, as they felt it was a good food to wean a child and it was easily available in the villages. All the mothers were able to name at least one commercial weaning food available in the community.

DISCUSSION

Nearly all the mothers (97.3%) in the rural villages in Tumpat, Kelantan breastfed their children. Earlier studies in Malaysia indicated that the prevalence of breastfeeding in rural areas among the Malay mothers was more than 90% (Teoh, 1975; Balakrishnan & Hasbullah, 1977). Pathmanathan (1978) noted that 77.5% of rural Malaysian mothers breast fed their child while Dimond and Ashworth (1987) noted that up to 80% of mothers breastfed their children in rural Malaysia. However, only 61% of mothers in rural and semi-urban communities in Trengganu breastfeed (Wan Manan, 1995). The low incidence of breastfeeding could be due to the inclusion of semi-urban together with rural mothers. The high incidence of breastfeeding found may be due to the focus of this study on rural Malay Muslim mothers who have stronger traditional practices compared to mothers in the other parts of Peninsular Malaysia. The district of Tumpat is also one of the poorest district in Malaysia, and economics is a possible factor for the higher rate of breastfeeding. Exclusive breastfeeding is also much higher in most of the age groups compared to mixed feeding with infant formulae. The extensive campaign to promote breastfeeding by Ministry of Health, including the set-up of baby friendly hospitals may be factors maintaining the high incidence of breastfeeding seen in the rural areas of Malaysia.

Breastfeeding should also be prolonged, up to two years as recommended in the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding produced by the joint WHO/UNICEF policymaker's meeting in 1990 (WHO, 1990). This is in line with the Muslim religious belief as it is stated in the Holy Quran that 'a mother shall breastfeed her child for two years'. In this study, 15.0% of mothers have already stopped breastfeeding when the child was 2-3 months old and 39.6% did so when the child's age was between 1-2 years old. This is the trend seen in many developing countries, where the duration of breastfeeding is becoming shorter (WHO, 1982). In a review on the causes of stopping breastfeeding, insufficient milk was found as the most likely potential problem for breastfeeding mothers (Hill & Humenick, 1989). This

was also the most common reason cited in this study, where mothers felt that there was insufficient milk produced and their child was always hungry. However, it has been said that any inadequacy in breast milk production is more likely to be due to biocultural conditioning than from any inherent physiological inadequacy (Underwood & Hofvander, 1982). Kandiah and San (1984), in a study of pregnant mothers in Kuala Lumpur, noted that although 91.9% of the mothers considered breast milk as the best food for babies, only 63.5% actually preferred to give breast milk. This negative attitude towards actual breastfeeding will reduce milk production which will be inadequate for the child. Work was the second most common reason for terminating breastfeeding, which was not found in this study as most of the mothers are housewives. However, a lot of rural housewives work in the agricultural fields, helping their husbands. The working mother, who is becoming a common scenario in Malaysia, will have difficulty sustaining breastfeeding once she starts working. Facilities and support for breastfeeding at the workplace is generally lacking and the mother will have to supplement or replace breastmilk with infant formulae. The other alternative is to wean the child at an earlier age, which is presently seen in a number of developing countries. For working mothers, continued support should be given to the mother to help sustain breastfeeding for as long as possible. This should include flexibility in maternity leave, where it can be extended for mothers to continue breastfeeding. Child care facilities at the workplace should also be established so that breastfeeding can be done at the workplace.

The three most popular weaning food, accounting for 98.9% of the children, were Nestum (45.0%), rice porridge (42.4%) and wheat porridge (11.5%). Nestum is a commercial weaning food comprising of a milk powder and a cereal product, either wheat or rice. In her study of infant feeding in peninsular Malaysia, Manderson (1984) noted that 28% of rural mothers mentioned Nestum as 'healthy', providing the baby with energy and vitamins. It is the most popular weaning food found in this study, even though the mothers were educated and counselled by the health staff on home prepared weaning food. It is usually the attractive packaging and aggressive marketing by commercial companies which deludes the mother into thinking that these foods are the next logical step in the process of feeding her child, and she does not consider the use of home-produced foods (Clark & Laing, 1990). The convenience of using Nestum in preparing small amounts of weaning food, especially at the initiation of weaning, may also be a factor for its popularity. For these mothers, the purchasing of the more expensive commercial weaning food may be compensated by the convenience in preparation and her ability to then focus on income generating activities for the family. The advice on the cheaper home produced weaning food should be still be emphasised, especially for the economically disadvantaged mothers in the rural areas.

Rice porridge and paste was the second most popular weaning food, given by 42.6% of the mothers. The preference for rice porridge and paste might reflect the local custom where rice is the traditional staple food in rural villages in Malaysia. Rice is believed to be able to give strength to the child. The popularity may also be due to the advice and counselling of mothers by the health staff where it is stressed that rice porridge is the best weaning food for children, which can be easily prepared at home. The usual advice is to add fish, chicken meat or anchovies to the rice porridge. The economic situation of rural mothers may also influence the usage of commercially prepared foods such as Nestum as economics is an important reason for poor communities (Nagra & Gilani, 1987). In Sudan, the preference for rice porridge/paste was its

use as a remedy, and nourishment during attacks of diarrhoea which are common during weaning time (El Bushra, Tigerman & El Tom, 1988).

CONCLUSION

It is hoped that the results of this study will help in the proper understanding of breastfeeding and weaning practices in rural communities in Malaysia. Child health programmes in Malaysia is an integral part of the Primary Health Care services offered by the Ministry of Health. This study points out that there is a large gap between infant feeding practices recommended by WHO and the actual current practices by rural Malaysian mothers. Increased efforts in promoting exclusive breastfeeding for children up to 4 months of age, prolonging the duration of breastfeeding up to 2 years and weaning at 4 to 6 months of age, will be beneficial for the primary care of children and for decreasing morbidity and mortality in this age group.

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