**Original Article**

# Implications of diet and nutrition for growth and prevalence of anaemia in rural preschool-aged children in Shandong Province, China

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A nutrition surveillance and nutritional improvement programme through nutrition field worker training, nutrition education and encouraging the utilization of home gardens was undertaken among rural preschool-aged children in the four counties of Linshu, Caoxin, Zoucheng and Yucheng in Shandong Province in China from 1990 to 1995. A baseline survey was conducted in 1990. This included physical and biochemical measurements being taken on 3474 children aged 0–5 years and dietary household surveys being taken on a random subsample of 312 children. The baseline survey showed that the average height and weight of the subjects was lower than the World Health Organization (WHO) standard with the prevalence of stunting, underweight and wasting being 24.2, 12.5 and 2.1%, respectively (using the *Z* scores ≤ –2 as the cut-off point). The prevalence of anaemia was 61.9% (using haemoglobin (HB) ≤ 110 g/L as the cut-off point). The range of mean intakes of protein and energy was, respectively, 54.0–67.2% and 56.4–68.4% of the Chinese recommended dietary allowance (RDA) depending on the age group. Mean calcium intake was less than 30% of the RDA for all age groups and the mean intakes of ascorbic acid, niacin, retinol and riboflavin were between 30.6 and 96.1% of the RDA. Nutrition education and nutrition field worker training were the key components of the intervention phase that followed the baseline survey. Over 5 years, 531 nutrition field workers were trained, 1200 parents joined in nutrition classes and approximately 8000 villagers received basic nutrition information. The latter included promotion of breast-feeding, identification of sources of appropriate foods for weaning, and also for the prevention and treatment of common nutritional deficiencies. Home gardens for fruit, vegetable and livestock were also encouraged. The evaluation survey of the project was conducted in 1995 among 2728 0–5-year-old children. The results indicated that the nutritional status of preschool-aged children had improved greatly. The prevalence of stunting and underweight was reduced by 37.8 and 21.3%, respectively, while there was no significant change in the prevalence of wasting. The average rate of anaemia decreased by 79.6% in 1995.

**Key words: anaemia, China, growth, nutrition education, nutrition improvement, nutrition surveillance, preschool children.**

## Introduction

China has improved many of the food-related problems of its population of 1.2 billion over the past decade. Improvement in diet and nutrition among the population is evident, the growth and development of urban and rural Chinese children has improved significantly.[1] However, there is still a significant proportion of malnourished preschool children in China according to the reference standard proposed by the US National Centre of Health Statistics (NCHS), that is using a *Z* Score of ≤ –2 of the height and weight for age as the criteria for the diagnosis of malnutrition.[2] Food and nutrition problems are worst in rural areas.[1] The average height and weight of rural preschool-aged children is significantly lower than the World Health Organization (WHO) standard, the rate of anaemia is high, especially in 6–12 month age groups, and the intakes of protein, energy, calcium, vitamin $B_1$, vitamin $B_2$ and vitamin C have all been shown to be insufficient.[3,4] Given that the average *Z* scores of height for age and weight for age among rural children are lower than for those in urban areas, targeted nutritional interventions for high-risk groups have been proposed, halving the malnutrition of children under 5 years has been set as one of the goals to be achieved by the year 2000 by the Chinese government.[2,5,6] This paper examines the results from a 5-year (1990–95) nutrition surveillance and study of growth and the prevalence of anaemia among preschool-aged children in the poor rural areas of Linshu, Caoxin, Zoucheng and Yucheng in Shandong Province in China.

## Methods

### *Subjects*

The subjects were preschool children aged 0–5 years in villages randomly selected from the four poor counties of Linshu, Caoxin, Zoucheng and Yucheng in Shandong Province,

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with a total population of over 87 million, which is situated in the eastern part of China. All the children aged 0–5 years registered in the village household lists were asked to participate, the response rate was 92.8% and 90.6% in 1990 and 1995, respectively. The selection criteria for these four counties were: the average per capita annual income was less than 300 RenMinBi (RMB) in 1989 (the average per capita income for rural people in Shandong Province in 1989 was 939.6 RMB) and the infant death rate was more than 5%. Two towns were selected at random from each county and four geographically discrete villages were selected at random from each selected town. A total of 3474 and 2744 children aged 0–5 years participated in the 1990 baseline and 1995 cross-sectional evaluation surveys, respectively.

***Baseline and follow-up measurement***

The nutritional status of the subjects was evaluated using the standard proposed by the US National Centre of Health Statistics (NCHS) and WHO, that is, a reference range utilizing a $Z$ score $\leq -2$ of height for age (HT/A), weight for age (WT/A) and weight for height (WT/HT) as the criteria for the diagnosis of stunting, underweight and wasting.[2]

$$\text{The } Z \text{ score is } \frac{\text{observed value} - \text{median reference value}}{\text{SD of reference population}}.$$

The baseline survey was carried out in June 1990 and involved a total of 3474 subjects. The four components of the baseline survey comprised questions about children's health, the dietary intakes of the children, household conditions and community conditions. The information was collected by the Shandong Province Health Survey team using a standard validated questionnaire.[7] The components of the children's health survey included infant feeding patterns. Height (length) and weight measurements were taken using a modified TG–2 height meter or WB-II lying length model and a RGF-140 weight scale (Beijing Tractor Manufacture Factory; Beijing, China). Children up to 36 months of age were measured lying down using the WB-II lying length model and older children were measured standing using the TG–2 height meter. Shoes, hats and overcoats of the subjects were removed for weight measurements and shoes were removed for the height measurements. A haemoglobin assay was done by the standard haemoglobin cyanmethemoglobin method (HICN) in a modified spectrophotometer Model 721 or 722 (Shanghai Optical Instrument Plant; Shanghai, China).[7] The dietary survey was based on 3-day food recall collected from parents by a member of the team. Data were not collected for breast-fed infants. Information on household and living conditions was collected in order to obtain proxy indicators of socioeconomic standard and family health habits. Information on community conditions including type of crops grown, geographical position, health services and capital income was also collected. Dietary data were collected twice a day after breakfast and after lunch and parents were asked to make records for their children if possible. The professional nutritionist asked the participants to report everything they ate or drank the previous day. The nutritionists checked the dietary data with a checklist to make sure every item had been recorded, and it was therefore likely that the records were accurate. No calculations were undertaken to investigate under-reporting, which is therefore a limitation of this study. Wide seasonal variation of food availability means that calculation of under-reporting and assessments of physiological energy intakes is not accurate from a single data collection.

A total of 2744 subjects aged 0–5 years registered in the village household lists participated in the 1995 survey which included the same components as the 1990 baseline survey, except for the dietary information. The proportion of 0–1-year-old children was lower in 1995 than that in 1990. However, the difference was not statistically significant. A survey of Knowledge, Attitude and Behaviour (KAB)[7] in relation to nutrition was also undertaken with a sample of 200 married women. This survey tool had been validated.

***Nutrition improvement measures***

The various measures were implemented in all of the 32 villages. They included:

***Local nutrition field worker training.*** The nutrition training courses conducted by a nutritionist included information about elementary nutrition, diagnosis, prevention and treatment of common nutritional deficiency diseases and the basic principles of food and nutrition planning management.[8] Trainees included participants from the local Department of Agriculture, the Institute of Women's and Children's Health Care, the Health and Anti-Epidemic Station, the Women's United Association, as well as village doctors and village community leaders.

***Nutrition education.*** This programme component involved all members of the community. Basic nutrition information was disseminated through posters, radio, videos, slides, films, parental evening nutrition classes and general discussion groups. The content focused on breast-feeding and preparation of weaning food as well as the prevention and treatment of common nutrition deficiencies.

***Utilization of home gardens.*** Villagers were encouraged to plant vegetables and fruit, to raise livestock and poultry and to breed freshwater aquaculture with the support of local government and guidance from the Department of Agriculture. Special support was provided to some poor villagers to establish the manufacturing of tofu on a small scale in order to increase the family income and improve the diet of their children.

***Data processing and analysis***

The survey data were analysed using SAS 6.04[9] and ANTHRO[10] software (Chinese Academy of Prevention, Beijing, China). The nutritional status of the preschool children was compared with those available from the NCHS and WHO.[8] The prevalence of stunting, underweight and wasting was calculated using $Z$ score $\leq -2$ as the cut-off point.[2,11,12] The calculation of nutrient components of foods in the diet was based on the Food Composition Table compiled and published by the Institute of Nutrition and Food Hygiene of the Chinese Academy of Preventive Medicine. Energy intakes and intakes of various nutrients were compared with the Recommended Dietary Allowances (RDA) suggested by the Chinese Nutrition Society in 1989.[13,14] The results of the haemoglobin assay were determined using the standard suggested by WHO with anaemia being diagnosed if the haemoglobin level was $\leq 110$ g/L for 0–5-year-old children.

Any differences in the prevalence of stunting, underweight and wasting in the preschool children between 1990 and 1995, as well as differences among the four counties, were tested for significance by a $\chi^2$-test.

## Results

The *Z* scores for height for age, weight for age and weight for height among the subjects in the 1990 and 1995 surveys were below 0 and the difference was statistically significant for all groups. The growth level of rural preschool-aged children in Shandong Province is therefore significantly lower than that recommended by the NCHS–WHO standard.

### *The changing trend of nutritional status among rural preschool-aged children from 1990 to 1995*

The prevalence of stunting (HT/A $Z \leq -2$) in the 1990 baseline survey was 24.2%, this rate decreased to 15.0% in 1995, with the overall difference being significant ($P < 0.01$) (Table 1). The prevalence of stunting in Linshu in 1990 was the lowest among all counties. This difference between Linshu and the other three counties was statistically significant. No other differences were statistically significant in 1990. There were no significant differences in prevalence of stunting between each of the counties in 1995 (Table 1). The prevalence of underweight was 12.5% in 1990 in 0–5-year-old children and this decreased to 9.9% in 1995, with the overall difference being significant ($P < 0.01$) (Table 2). The prevalence of underweight in Linshu was also statistically lower than the other three counties in 1990. In 1995 there were statistically significant differences in prevalence of underweight between Linshu and Caoxian and between Linshu and Yucheng as well as between Zoucheng and Caoxian and between Zoucheng and Yucheng (Table 2). The average WT/HT *Z* score both for 1990 and for 1995 was –0.2. There was no statistically significant difference in prevalence of wasting overall, nor between any of the counties ($P > 0.05$) (Table 3).

### *The changing trend of average rate of anaemia among rural preschool-aged children*

Using HB ≤ 110 g/L as the cut-off point of anaemia, the average rate of anaemia was 61.9% in 1990 and 12.6% in 1995 (Table 4). This decrease was statistically significant ($P < 0.01$).

### *Dietary patterns and nutrient intake among rural preschool-aged children*

The results of the 1990 baseline dietary survey are shown in Tables 5 and 6. The range of mean intakes of protein and energy was, respectively, 54.0–67.2% and 56.4–68.4% of the Chinese RDA depending on age group. Mean calcium intake was less than 30% of the RDA for all age groups. Mean intakes of ascorbic acid, niacin, retinol and riboflavin were between 30.6 and 96.1% of the RDA.

### *Nutrition improvement measures*

From 1990 to 1995, the Provincial nutritionists trained 531 nutrition field workers who came from the four sample counties of Linshu, Caoxin, Zoucheng and Yucheng in Shandong Province. As most of the parents were busy with their farm work during the day, evening nutrition education classes were held for them. A total of 1200 parents in the villages joined 50 parental evening nutrition classes. It is estimated that almost 8000 villagers received nutrition information, which focused on breast-feeding, weaning food preparation, prevention and treatment of common nutritional deficiencies. This information was disseminated through a number of media including posters, radio, video, slide, and film and general discussion groups.

The results of the evaluation KAB questionnaire in 1995 indicated that nearly 80% of 200 married women surveyed understood the advantages of breast-feeding and intended to breast-feed their infants for at least 12 months. Eighty per cent of this sample also knew how to prepare suitable foods for initial weaning. Nearly 50% of this sample of women

**Table 1.** The prevalence of stunting among rural preschool-aged children (HT/A $Z \leq -2 \pm$ SD)

| Counties | 1990 | | | | | | | 1995 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *n* | *Z* score mean ± SD | | $Z \leq -2$ | | $Z \leq -3$ | | *n* | *Z* score mean ± SD | | $Z \leq -2$ | | $Z \leq -3$ | |
| | | | | *n* | % | *n* | % | | | | *n* | % | *n* | % |
| Linshu | 826 | –0.9 | 1.4 | 135 | 16.3 | 31 | 3.8 | 746 | –0.9 | 1.4 | 123 | 16.5 | 21 | 2.8 |
| Caoxian | 950 | –1.4 | 1.6 | 293 | 30.8 | 73 | 7.7 | 796 | –0.9 | 1.4 | 119 | 15.0 | 27 | 3.4 |
| Zoucheng | 832 | –1.1 | 1.4 | 180 | 21.6 | 43 | 5.2 | 381 | –0.9 | 1.4 | 68 | 17.9 | 21 | 5.5 |
| Yucheng | 866 | –1.4 | 1.6 | 231 | 26.7 | 55 | 6.4 | 805 | –0.6 | 1.3 | 100 | 12.4 | 29 | 3.6 |
| Total | 3474 | –1.2 | 1.7 | 839 | 24.2* | 202 | 5.8 | 2728 | –0.8 | 1.4 | 410 | 15.0* | 98 | 3.6 |

*$\chi^2 = 73.0$; $P < 0.01$. HT/A, height for age.

**Table 2.** The prevalence of underweight among rural preschool-age children (WT/A $Z \leq -2 \pm$ SD)

| Counties | 1990 | | | | | | | 1995 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *n* | *Z* score mean | ± SD | $Z \leq -2$ | | $Z \leq -3$ | | *n* | *Z* score mean | ± SD | $Z \leq -2$ | | $Z \leq -3$ | |
| | | | | *n* | % | *n* | % | | | | *n* | % | *n* | % |
| Linshu | 826 | –0.7 | 1.6 | 59 | 7.1 | 9 | 1.1 | 746 | –0.7 | 1.6 | 43 | 5.7 | 3 | 0.4 |
| Caoxian | 950 | –1.0 | 1.1 | 133 | 14.0 | 19 | 2.0 | 796 | –0.9 | 1.4 | 95 | 12.0 | 11 | 1.4 |
| Zoucheng | 832 | –0.9 | 1.4 | 113 | 13.6 | 16 | 1.9 | 381 | –0.4 | 1.2 | 24 | 6.2 | 3 | 0.8 |
| Yucheng | 866 | –1.0 | 1.1 | 130 | 15.0 | 11 | 1.3 | 805 | –0.8 | 1.4 | 107 | 13.3 | 22 | 2.7 |
| Total | 3474 | –0.9 | 1.4 | 435 | 12.5* | 55 | 1.6 | 2728 | –0.7 | 1.6 | 269 | 9.9* | 39 | 1.4 |

*$\chi^2 = 10.8$; $P < 0.01$. WT/A, weight for age.

**Table 3.** The prevalence of wasting among rural preschool-aged children (WT/HT Z ≤ –2 ± SD)

| Counties | 1990 | | | | | | | 1995 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *n* | *Z* score mean ± SD | | *Z* ≤ –2 | | *Z* ≤ -3 | | *n* | *Z* score mean ± SD | | *Z* ≤ –2 | | *Z* ≤ -3 | |
| | | | | *n* | % | *n* | % | | | | *n* | % | *n* | % |
| Linshu | 826 | –0.1 | 1.2 | 14 | 1.6 | 4 | 4.1 | 746 | –0.1 | 1.2 | 4 | 0.5 | 1 | 0.1 |
| Caoxian | 950 | –0.1 | 1.2 | 23 | 2.4 | 4 | 0.4 | 796 | –0.3 | 1.2 | 23 | 2.9 | 3 | 0.4 |
| Zoucheng | 832 | –0.3 | 1.2 | 25 | 3.0 | 6 | 0.7 | 381 | –0.1 | 1.2 | 4 | 1.0 | 1 | 0.3 |
| Yucheng | 866 | –0.2 | 0.9 | 11 | 1.3 | 1 | 0.1 | 805 | –0.5 | 0.7 | 51 | 6.4 | 6 | 0.8 |
| Total | 3474 | –0.2 | 0.9 | 73 | $2.1^{NS}$ | 15 | 0.4 | 2728 | –0.2 | 0.9 | 82 | $3.0^{NS}$ | 11 | 0.4 |

$^{NS}\chi^2 = 5.1$; $P > 0.05$. WT/HT, weight for height.

**Table 4.** Average rate of anaemia among rural preschool-aged children

| Counties | 1990 | | | 1995 | | |
|---|---|---|---|---|---|---|
| | *n* | HB ≤ 110 g/L (*n*) | % | *n* | HB ≤ 110 g/L (*n*) | % |
| Linshu | 826 | 661 | 80.0 | 751 | 148 | 19.7 |
| Caoxian | 950 | 447 | 47.0 | 798 | 55 | 6.9 |
| Zoucheng | 832 | 586 | 70.4 | 387 | 27 | 7.2 |
| Yucheng | 866 | 456 | 52.7 | 808 | 116 | 13.4 |
| Total | 3474 | 2150 | 61.9* | 2744 | 346 | 12.6* |

*$\chi^2 = 1538.4$; $P < 0.01$.

**Table 5.** Average food consumption of rural preschool-aged children (2–5 years) in Shandong Province in 1990

| | Consumption (g/per capita/day) | | Percentage Contribution |
|---|---|---|---|
| | Mean | ± SD | |
| Cereals | 196.2 | 170.5 | 34.6 |
| Starch tubers | 35.2 | 55.5 | 6.2 |
| Dry legumes and their product | 12.0 | 20.7 | 18.4 |
| Other vegetables | 104.3 | 96.9 | 72.1 |
| Fruit | 191.6 | 230.7 | 33.8 |
| Animal-based foods | 23.9 | 41.2 | 4.8 |
| Oils and fats | 1.9 | 10.9 | 0.3 |
| Sugar | 2.4 | 16.8 | 0.4 |
| Total | 567.5 | | 100.0 |

indicated that they could prepare suitable foods for 6–24-month-old infants. Furthermore, the average planted areas of home vegetable gardens in 1995 had increased by 13.5% since 1990.

## Discussion

The 1990–95 Nutrition Surveillance and Nutrition Improvement program among rural preschool-aged children was the first such long-term project in the area of public health nutrition in Shangong Province. The study had a similar format to those projects conducted in several other provinces in China during 1990–1995[15,16] and provided empirical information about the nutritional status of preschool-aged children in the poor rural areas of the province. These data provide the basis for the government to develop and implement a range of similar nutrition improvement activities in this and other similar provinces in China. Height and weight of children are good indicators for assessing nutritional status. Height for age is an acceptable criterion for the diagnosis of long-term malnutrition, while weight for age and weight for height can be used to evaluate the impact of acute food shortages or acute malnutrition.[8,12,17]

### *Baseline survey*

The results indicated that the average height and weight of rural preschool-aged children in Shandong Province were lower than that recommended by NCHS–WHO standards. The pattern of prevalence of stunting, underweight and wasting is suggestive of chronic malnutrition rather than acute malnutrition or an acute shortage of food. The average prevalence of stunting, underweight and wasting among preschool-aged children in poor rural areas in the whole of China was 36.2, 23.7, 3.6%, respectively, in 1990,[18] so the nutritional status of rural preschool-aged children in Shandong Province was better than the average national level.

Among the factors underlying chronic malnutrition, poverty is likely to be a major contributor, but other factors include the educational level of the mother, the prevalence of breast-feeding and the availability of a safe water supply.[19,20] Nutritional anaemia is very prevalent among women and children in developing countries and iron deficiency anaemia is usually the most common form.[5,21] Although the average iron intake of the children was adequate, more than 60% of the children suffered from anaemia in 1990. This high prevalence of anaemia is probably due to the overall poor quality of the diet that affects the absorption of iron, such as low vitamin C and low animal food intake.

### *Nutrition improvement measures*

The nutrition improvement measures taken are suggestive of a number of positive results. First, the nutritional status of the subjects as indicated by the prevalence of anaemia seems to have improved significantly. The prevalence of stunting and underweight has decreased, the differences were statistically significant. Nearly 80% of subjects acquired basic nutrition knowledge in 1995. The pattern of KAB among the women appeared to have benefited the children and family. However, it is difficult to assess the changes in KAB of the people in the community as no comparable data were collected in the baseline survey. Generally, however, parents of infants living in rural areas in China lack knowledge of infant feeding and weaning.[22] However, this study showed that the people in the community had developed positive attitudes towards increasing their nutrition knowledge and towards receiving nutrition information even though the change may not have been due to the intervention.

The results of these nutrition improvement measures should therefore be interpreted with some caution, as the

**Table 6.** Average nutrient intake by age group among rural preschool-aged children in Shandong Province in 1990 (per capita/day)

| | 2-year *n* = 78 | | | 3-year *n* = 77 | | | 4-year *n* = 72 | | | 5-year *n* = 85 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | ± SD | RDA% | Mean | ± SD | RDA% | Mean | ± SD | RDA | Mean | ± SD | RDA% |
| Protein (g) | 26.9 | 18.8 | 67.2 | 28.7 | 19.3 | 63.7 | 30.7 | 20.2 | 64.0 | 28.5 | 19.9 | 54.0 |
| Fat (g) | 13.9 | 10.4 | | 11.9 | 8.2 | | 12.5 | 9.9 | | 12.3 | 10.2 | |
| Energy (KJ) | 3361 | 1188.3 | 68.4 | 3485 | 1190.5 | 62.7 | 3761 | 1240.3 | 62.9 | 3679 | 1215.2 | 56.4 |
| Calcium (mg) | 163.8 | 114.7 | 27.3 | 197.6 | 126.6 | 24.7 | 214.6 | 130.5 | 26.8 | 173.5 | 119.3 | 21.7 |
| Iron (mg) | 12.0 | 6.6 | 119.6 | 10.8 | 5.5 | 108.1 | 13.0 | 7.2 | 130.4 | 11.1 | 6.0 | 111.0 |
| Retinol (µg) | 384.4 | 325.6 | 96.1 | 359.3 | 307.8 | 71.9 | 281.9 | 231.7 | 56.4 | 279.6 | 228.9 | 37.3 |
| Thiamine (mg) | 0.8 | 0.3 | 118.2 | 0.9 | 0.4 | 107.0 | 0.9 | 0.4 | 116.0 | 0.9 | 0.4 | 101.3 |
| Riboflavin (mg) | 0.2 | 0.1 | 35.3 | 0.3 | 0.2 | 38.7 | 0.3 | 0.2 | 37.0 | 0.3 | 0.2 | 30.6 |
| Niacin (mg) | 6.2 | 3.6 | 88.6 | 6.3 | 63.6 | 65.3 | 6.8 | 3.8 | 84.8 | 6.5 | 3.6 | 62.5 |
| Ascorbic acid (mg) | 23.9 | 19.2 | 68.3 | 24.0 | 20.1 | 60.0 | 19.9 | 15.7 | 49.8 | 21.2 | 17.3 | 47.2 |

RDA, recommended daily allowance.

design did not formally incorporate any comparison group. Over this period (1990–1995), the economy developed steadily among the four sample counties and the income of villagers increased as a result of economic development projects besides the nutrition project. As well, local government invested in infrastructure including community health services and education. These factors could all have contributed to the improved nutritional status of the subjects. However, some findings of the anthropometrical measurements among preschool-aged children carried by the State Statistic Bureau in seven provinces in China over 1990–1995 seem to provide some confidence in interpreting the results as a 'real' intervention effect. For example, Shandong Province has a similar level of socioeconomic development and population structure to Hebei and Heilongjiang Provinces, where there were no provincial-wide nutrition improvement projects over the period 1990–1995. The average prevalence of stunting among rural preschool children in Hebei Province was almost constant between 1990 and 1995 and it was reduced by 12.5% only in Heilongjiang Province,[23] whereas it was reduced by 37.8% in the target intervention group in Shandong Province in 1995. Considering this nutrition project was conducted in poor rural areas of Shandong Province as a first trial, it has provided good experience in terms of trialling interventions. The shortcomings of methodology in this study could be overcome in any future research project of this type in China.

In conclusion, this preliminary study has provided useful information for studying trends in early childhood nutrition, particularly in rural areas. In addition, future studies should incorporate comparison or control groups so the success or otherwise of the intervention can be more clearly measured. As nutrition intervention programmes involve the collaboration of a range of people over a long period, it is suggested that further study should highlight the programme management as well as the development of policy in relation to nutrition guidelines.

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