

Evaluation Study No. 21



SPECIAL NUTRITION PROGRAMME

An
Evaluation Study

ISSUED BY
BUREAU OF STATISTICS & EVALUATION
GOVERNMENT OF PONDICHERRY

SPECIAL NUTRITION PROGRAMME
(Under Social Welfare)

The Evaluation Report on Special Nutrition Programme is the twenty-first issue in the Evaluation series of the Bureau of Statistics and Evaluation, Pondicherry.

This report critically deals with the implementation of Special Nutrition Programme (under Social Welfare) by the Directorate of Harijan and Social Welfare highlighting the achievements as well as the shortcomings on the basis of the guide-lines issued by the Government of India.

The willing co-operation extended by the Directorate of Public Instruction who is implementing agencies of this programme is gratefully acknowledged. It is hoped that this publication will be a useful addition to the evaluation series of this Bureau.

Pondicherry,
26-7-1973.

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EVALUATION REPORT ON SPECIAL NUTRITION PROGRAMME

(Under Social Welfare)

Introduction :

The Committee of Experts set up by the Government of India in the department of Social Welfare in 1968 under the chairmanship of Thiru Ganga Charan Sinha, M.P., made a comprehensive survey of the various needs of the child and recommended short-term and long-term programmes. The Committee has observed that malnutrition and under nourishment has been the bane of the Indian economy and that special drive should be undertaken to take care of the expectant/nursing mothers and children in the age-group of 0-6 years belonging to the economically weaker sections of the community. The survey has revealed that, out of the total number of children in the age-group of 0 to 6 years, nearly one-third belong to the weaker section of the society and require supplementary nutrition in a phased manner during the ensuing five years. It was rightly observed that, in order to build up a healthy young generation, such a scheme is a pre-requisite and that urgent steps should be taken towards this direction.

In deference to this, special nutrition programme was introduced during 1970-71 in the Tribal Development Blocks and slum areas of capital cities for children in the age-group of 0-3 years initially. During 1971-72 this scheme is expected to cover 20 lakhs children of both slum and tribal areas. In view of the importance of the programme, the Government of India have also decided to cover a larger target subject to availability of funds.

With a view to achieve this objective, the Government of India have recommended certain guidelines for supplementary feeding which are reproduced in Appendix II of this report.

In-so-far as this Union Territory is concerned, the scheme was started on 16th August 1970 with an initial strength of 700 children in the age-group of 0-3 years and subsequently, the benefit of the scheme was extended to cover children in the age-group of 3-6 years and expectant and nursing mothers.

50 ml. of boiled cow's milk and 2 slices of specially prepared vitaminised and sweetened bread manufactured by Modern Bakeries are supplied to children in the age-group of 0-6 years and 3½ slices of bread are supplied to expectant mothers and nursing mothers.

Milk is boiled in a central kitchen located in the Balwadi building at Govindasalai and transported to the distribution centres at 7.30 a.m. on all distribution days. Only on 25 days in a month (300 days in a year) the distribution is made. The distribution centres are located in the Balwadies of the respective areas and where there is no Balwadi/Institution attached to the welfare department, the centres are located in public places like temples etc. A list of distribution centres is furnished in Appendix I to this report.

The programme is manned either by the Balasevika or Departmental staff of the institution in which the distribution is made or by a local voluntary worker as the case may be. A helper or Ayah assists in the distribution of milk, bread etc. She is paid honorarium at the rate of Rs. 30 p.m.

The financial and physical targets and achievements under the scheme are furnished in the table below :—

TABLE 1

Sl. No.	Year	Financial (in rupees)		Physical (No.)				
		Target	Achievement	Target		Achievement		
				Children	Mothers	Children	Mothers	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1.	1970-71	34,000	33,462	700	..	700	..
2.	1971-72	3,02,000	2,26,399	9,600	2,400	9,200	2,000

Objectives of the study :

The principal objectives of this evaluation study are to find out :—

- (1) Whether the Special Nutrition Programme (under Social Welfare) has evoked public response ;
- (2) Whether the scheme is being implemented in accordance with the rules, regulations and guidelines formulated by the Government of India ; and
- (3) Whether the scheme has helped to improve the physical and mental well-being of the beneficiaries to a significant extent.

Methodology :

There are in all 45 centres in the four regions of this Union Territory. Ten distribution centres were selected at random in Pondicherry region and in each centre 15 child beneficiaries, five expectant mothers and five nursing mothers were contacted for field canvassing. In respect of child beneficiaries, parents were contacted. Three questionnaires were evolved for this purpose, one for each category of beneficiaries. Field canvassing was done by three Statistical Inspectors of the Statistical Department.

Findings of the Study

PART I

(Child Beneficiaries)

This part deals with the findings of the study in so far as the child beneficiaries are concerned.

In the table below, the size of family to which the beneficiaries belong is furnished :—

TABLE 2

Sl. No.	Size of family	Number of beneficiaries	Percentage
(1)	(2)	(3)	(4)
1.	One .. .. .	..	..
2.	Two .. .. .	..	..
3.	Three	15	10.00
4.	Four	28	18.67
5.	Five	32	21.33
6.	Six and above	75	50.00
	Total ..	150	100.00

Sex and age of beneficiaries :

It will be quite significant to know the sex-wise distribution of beneficiaries.

TABLE 3

Sl. No.	Age	Number of beneficiaries		Percentage	
		Male	Female	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)
1.	0—1	13	6	8.67	4.00
2.	1—2	25	19	16.67	12.67
3.	2—3	19	22	12.67	14.67
4.	3—4	11	12	7.33	8.00
5.	4—5	11	6	7.33	4.00
6.	5—6	2	4	1.33	2.66
	Total	81	69	54.00	46.00

54.00% of the children are males while 46.00% are female children. 69.35% of the children are three years and below in age while 30.65% of the child beneficiaries are in the age group 3—6 years.

Number of living children :

The number of living children in the beneficiaries' families will be an important point for the proper assessment of the optimum utilisation of the benefit.

TABLE 4

Sl. No.	Number of children	Number of beneficiaries' family	Percentage
(1)	(2)	(3)	(4)
1.	One	24	16.00
2.	Two	33	22.00
3.	Three	34	22.67

(1)	(2)	(3)	(4)
4.	Four	33	22.00
5.	Five	11	7.33
6.	Six and above	15	10.00
	Total ..	150	100.00

60.67% of the beneficiaries' families have three children and less while 39.33% have four children and above.

Occupation of the head of the household :

Occupation of the head of the household of the beneficiaries is summarised below :—

TABLE 5

<i>Sl. No.</i>	<i>Occupation</i>	<i>Number of beneficiaries</i>
(1)	(2)	(3)
1.	Mason	3
2.	Non-Agricultural Coolies	13
3.	Agricultural Cooli	4
4.	Mill Worker	24
5.	Working in shop	15
6.	Government Employee	10
7.	Carpenter	4
8.	Goldsmith	4
9.	Electrician	4
10.	Driver	3
11.	Petty trader	9
12.	Rickshaw puller	2
13.	Tailor	5
14.	Municipality's worker	1
15.	Dhobi	9
16.	Watchman	1
17.	Gardener	1
18.	Accountant	1
19.	Fishermen	11
20.	Weaver	18
21.	Blacksmith	1

(1)	(2)						(3)
22. Painter	1
23. Tapper	1
24. Not known	2
25. No work	3
							150
					Total ..		150

The table reveals that almost all categories of occupation characteristic of an urban slum are getting the benefit of the Special Nutrition Programme.

Monthly income of the head of household :

Monthly income is perhaps the best indicator of the extent of genuine benefit extended to the weaker section of the community. In the following table, particulars of monthly income of the household of the selected beneficiaries are given :—

TABLE 6

<i>Sl. No.</i>	<i>Monthly income</i>	<i>Number of heads of household</i>	<i>Percentage</i>
(1)	(2)	(3)	(4)
1. 50 and below .. .. .	..	11	7.33
2. 50—75 .. .. .	..	20	13.33
3. 76—100 .. .. .	..	50	33.34
4. 101—125 .. .. .	..	22	14.67
5. 126—150 .. .. .	..	34	22.66
6. Above 150 .. .. .	..	11	7.33
7. Not known .. .. .	..	2	1.34
		150	100.00
	Total ..		

54% of the heads of household of the beneficiaries earn an income of Rs. 100 and below. Only 7.33% are having a monthly income of Rs. 150 and above.

Beneficiaries reporting ability to feed their children otherwise :

It is, however, interesting to note that there is some appreciable percentage of benefitted parents who report ability to feed their children otherwise. The number of such beneficiaries is furnished in the table below :—

TABLE 7

Sl. No.	Name of centre	Number of beneficiaries
(1)	(1)	(3)
1.	Kosapalayam .. .. .	..
2.	Ouppalam	1
3.	Govindasalai .. .. .	..
4.	Muthialpet	11
5.	Solainagar (west)	3
6.	Solainagar (east) .. .. .	..
7.	Pethuchettipet	12
8.	Thilaspeth	4
9.	Lawspeth	2
10.	Dubrayapeth .. .. .	..
	Total	33

22% of the beneficiaries' parents have reported ability to feed their respective children otherwise. From an enquiry from the parents of children beneficiaries, it is found that the 150 children taken up under the study belong to 62 families which means that in general more than one child is benefitted under each family under the scheme :—

TABLE 8

Sl. No.	Name of centre	Number of families
(1)	(2)	(3)
1.	Kosapalayam	4
2.	Ouppalam	7
3.	Govindasalai	8
4.	Muthialpet	8

(1)	(2)	(3)
5. Solainagar (West)	8
6. Solainagar (East)	9
7. Pethuchettipet	8
8. Thilaspeth	5
9. Lawspeth	1
10. Dubrayapeth	4
	Total ..	<u>62</u>

In 41.33% of the beneficiaries' families, more than one child benefited out of the Special Nutrition Programme.

Opinion on quality, quantity and suitability of the food supplied :

The opinion of the beneficiaries' parents was gathered on the quality, quantity and suitability to health of the food supplied to them under the programme. This is presented in the following table :—

TABLE 9

Reporting satisfaction on bread and milk

Sl. No.	Name of centre	Quality		Quantity		Suitability to health	
		Satisfactory	Not satisfactory	Satisfactory	Not satisfactory	Satisfactory	Not satisfactory
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Kosapalayam ..	15	..	15	..	15	..
2.	Ouppalam	15	..	15	..	15	..
3.	Govindasalai	15	..	15	..	15	..
4.	Muthialpet	12	3	13	2	12	3
5.	Solainagar (East) ..	15	..	15	..	15	..
6.	Solainagar (West) ..	4	11	15	..	4	11
7.	Pethuchettipet	15	..	15	..	15	..
8.	Thilaspeta	15	..	15	..	15	..
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
9.	Lawspeta	15	..	15	..	15	..
10.	Dubrayapeta	14	1	15	..	15	..
	Total ..	135	15	148	2	136	14

An overwhelming majority have reported absolute satisfaction on the food supplied, to them under the programme. 90% are satisfied with the quality of the milk and bread supplied, while 98.66% have reported satisfaction on the quantity of bread and milk supplied.

PART II

Expectant and Nursing Mothers

This part deals with the aspects of the implementation of the scheme towards expectant and nursing Mothers.

At the outset, the size of family of the expectant and nursing mothers is furnished below :—

TABLE 10

<i>Sl. No.</i>	<i>Size of family</i>					<i>Expectant mothers</i>	<i>Nursing mothers</i>
(1)	(2)					(3)	(4)
1. One
2. Two	4	..
3. Three	7	8
4. Four	10	6
5. Five	11	5
6. Six and above	18	31
					Total	50	50

22% of expectant mothers and 16.00% of nursing mothers belong to families having three members and below. Quite significantly 36% of the expectant mothers and 62% of the nursing mothers hail from larger families consisting of six members and above.

Order of conception among expectant mothers—Order of child among Nursing Mothers :

An enquiry has been made among the expectant and nursing mothers so as to find out the position of the beneficiaries vis-a-vis the order of conception and nursing child.

TABLE 11

Sl. No.	Order of child under conception/ nursing	Expectant mothers	Nursing mothers
(1)	(2)	(3)	(4)
1.	1st	6	8
2.	2nd	5	8
3.	3rd	13	8
4.	4th	13	7
5.	5th	5	9
6.	Six and above	8	10
	Total ..	50	50

Under the scheme, 12% of the expectant mothers at the stage of first conception, and 16% of the nursing mothers having first child, are benefitted. 16% of the expectant mothers derive the benefit for the sixth and above conception while 20% of the nursing mothers get the benefit for their sixth and above child.

Number of living children :

The number of living children in the beneficiaries' families at the time of the survey is indicated in the following table :—

TABLE 12

Number of living children

Sl. No.	Number of living children	Expectant mothers	Nursing mothers
(1)	(2)	(3)	(4)
1.	One	8	9
2.	Two	10	10
3.	Three	12	8
4.	Four	8	10
5.	Five	5	9
6.	Six and above	3	4
7.	No child	4	..
	Total ..	50	50

16% of the expectant mothers and 18% of the nursing mothers have one child living. However, 8% of the expectant mothers have no living child at all.

Occupation of beneficiaries' husbands :

Occupation of the husbands of the beneficiaries is presented in the following table :—

TABLE 13

<i>Sl. No.</i>	<i>Occupations</i>	<i>Expectant mothers</i>	<i>Nursing mothers</i>
(1)	(2)	(3)	(4)
1.	Private managements .. .. .	..	5
2.	No work .. .. .	..	1
3.	Teacher	1	..
4.	Mill worker	9	12
5.	Mason	3	1
6.	Goldsmith	1	..
7.	Workshop labourers	1	..
8.	Cooli	1	6
9.	Bakery workers .. .. .	..	1
10.	Cleaning .. .. .	..	1
11.	Barber	1	..
12.	Meal carrier	1	..
13.	Tinkering	1	..
14.	Tailoring	4	1
15.	Driver	2	..
16.	Tapper	3	..
17.	Petty traders	4	..
18.	Fishing	3	3
19.	Weaving	4	5
20.	Private workshop	2	1
21.	Washerman	2	..
22.	Agriculture	1	2
23.	House work	1	3
24.	Watchman	2	1
25.	Carpentry .. .. .	..	1
26.	Rickshaw pulling .. .. .	..	2
27.	Peon	1	..
28.	Draughtsman	1	..
29.	Constable .. .. .	..	1
30.	Electrician .. .. .	..	1
31.	Firemen .. .. .	..	1
32.	Road Maistry	1	1
	Total	50	50

The above table reveals the fact that almost all categories of occupation that are characteristic of an urban slum area are reflected.

Age-group of beneficiaries :

An analysis of the age-group of the beneficiaries is indicated below :—

TABLE 14

<i>Sl. No.</i>	<i>Age-group</i>	<i>Expectant mothers</i>	<i>Nursing mothers</i>
(1)	(2)	(3)	(4)
1.	16 to 20	10	14
2.	21 to 25	20	16
3.	26 to 30	10	11
4.	31 to 35	8	6
5.	36 to 40	2	3
6.	41 and above .. .. .	..	..
	Total ..	50	50

20% of the expectant mothers and 28% of the nursing mothers are in the age-group 16—20. However, maximum number of beneficiaries are in the age-group 21—25, 40% and 32% among expectant and nursing mothers respectively. None of the beneficiaries is above the age of 40.

Monthly income of the head of household :

An analysis of the monthly income of the head of household of the beneficiaries will indicate the extent of real benefit extended to the needy and poor. This is presented in the table below :—

TABLE 15

<i>Sl. No.</i>	<i>Income group</i>	<i>Expectant mothers</i>	<i>Nursing mothers</i>
(1)	(2)	(3)	(4)
1.	Below Rs. 50	2	3
2.	51 to 75	6	9
3.	76 to 100	17	20
4.	101 to 125	7	4

(1)	(2)				(3)	(4)
5. 126 to 150	12	9
6. Above 150	6	4
7. No income	1
				Total ..	50	50

50% of the heads of household of the expectant mothers earn an income of Rs. 100 and below. 64% of the heads of household of the nursing mothers have an income of Rs. 100 and below. Only 12% of the heads of household of expectant mothers and 8% of nursing mothers earn a monthly income of Rs. 150 and above.

Views of beneficiaries on timing, treatment, medical check-up etc.

The views of the beneficiaries on the suitability of supply timings, behaviour of the distributing personnel, medical checkup etc. have been gathered and are presented in the table below :—

TABLE 16

Sl. No.	Expectant Mothers		Nursing Mothers	
	Reporting Yes	Reporting No	Reporting Yes	Reporting No
(1)	(2)	(3)	(4)	(5)
1. Suitability of supply timings	48	2	47	3
2. Satisfaction about treatment	50	..	48	2
3. Medical check-up so far done	2	48	1	49
4. Supply of identity cards	50	..	50	..

96% of the expectant mothers and 94% of the nursing mothers have reported favourably about the supply timings while 100% of the expectant mothers and 96% of the nursing mothers have reported entire satisfaction about the treatment by the distributing personnel. However, in respect of medical check-up, an overwhelming majority have stated that no medical check-up was done. Medical check-up was done only in respect of 4% of expectant mothers and 2% of nursing mothers.

Summary of findings

1. 50% of the families of child beneficiaries have six members and above.

2. 54% of the child beneficiaries are males while 46% are female children.

3. 60.67% of the families of the child beneficiaries have three children and below living.

4. Almost all categories of occupation characteristic of an urban slum area are deriving the benefit of the scheme.

5. 54% of the head of household of child beneficiaries earn Rs. 100 and below per month. Only 7.33% of them have a monthly income of Rs. 150 and above.

6. 22% of the parents of the child beneficiaries have accepted that they will be able to feed their children adequately even otherwise.

7. Quite unfortunately 41.33% of the beneficiaries, families are, benefitted under the scheme for more than one child. This has to be rationalised so as to cover more number of families restricting the benefit of the programme to one child per family.

8. An overwhelming majority of the parents have reported absolute satisfaction on the quality and quantity of milk and bread supplied to them. 90% of the parents have reported satisfaction on the quality of milk and bread supplied while 98.66% are satisfied with the quantity.

9. However, in this connection, it is pointed out that the quantity of milk supplied to children (50 ml.) is too low according to the norms fixed by the Government of India.

10. Levels of nutrition have not been observed as per Government of India's scheme.

11. 22% of the selected expectant mothers and 16% of the nursing mothers have three members and below in their families.

12. Only 12% of the expectant mothers derived the benefit for their first conception while only 16% of the nursing mothers received benefit for their first child.

13. 16% of the expectant mothers and 18% of the nursing mothers have one child living.

14. The most important finding is that people from almost all categories of occupation characteristic of an urban slum area receive the benefit of the scheme in respect of expectant mothers and nursing mothers.

15. The maximum number of beneficiaries in respect of expectant and nursing mothers are in the age-group 21—25. The respective percentages are 40 and 32.

16. 50% of the heads of household of expectant mothers and 64% of the heads of household of nursing mothers earn a monthly income of Rs. 100 and below.

17. Supply timing has been reported to be suitable by an overwhelming majority of the beneficiaries. 96% of the expectant mothers and 94% of the nursing mothers have reported favourably.

Recommendations :

1. With regard to expectant and nursing mothers, supply of multi-vitamin tablets on alternate days in addition to bread may be introduced.

2. With regard to children in the age-group of 1 to 6 years, in addition to milk and bread, vitamin A & D tablets may be given.

3. With regard to infants of less than 12 months, a quantity of 225 ml. milk should be supplied. Otherwise, the present meagre quantity of 50 ml. will not have desired effect.

4. When demand is more and supply is limited, it is imperative that norms and priorities should have been evolved before actually launching on the distribution of milk and bread. The following norms and priorities are, therefore, suggested.

Norms :

1. The monthly income of the beneficiary's family should not in any case exceed Rs. 150 p.m.

2. The selected beneficiary should not derive such facility through any other source (e.g. welfare organisations).

3. Only one kind of benefit should be extended to any selected household.

Priority :

Keeping in view the above norms, the following order of priority may be given for selection of beneficiaries :—

1. The lowest income group with the largest number of members in the household should get the foremost priority.

2. In the case of expectant mothers, priority should be given for the first conception and

3. In the case of nursing mothers priority should be given to those with one child.

4. Expectant mothers should be supplied with one multivitamin tablet a day as per Government of India's norm. Similarly, 50 ml. of milk supplied to child beneficiaries is too low a quantity to produce any tangible effect on health. As suggested by the Government of India, 225 ml. of milk per child beneficiary per day should be given.

5. In order that the benefit of the programme is wholesome and purposeful, it is necessary that the programme is initiated at the stage of pregnancy and continued till the child passes out the stage of infancy. Otherwise, if the benefit extended during the pregnancy period is discontinued afterwards or revived for the child beneficiary, the efficacy of the programme will be lost.

6. The present system of transport of milk from the Central kitchen to the issuing centres is far from satisfactory. Milk should be transported in sealed container. This will eventually prevent any adulteration while in transit.

7. For purpose of inspection, the Director of Harijan and Social Welfare has asked for an additional vehicle, stating that the ceiling for petrol consumption is a hindrance for using the existing vehicle for effective supervision. However, in view of the importance of supervision, the ceiling on petrol consumption may be relaxed instead of going in for an additional vehicle.

8. A separate building may be taken up for storing the vessels, and oven and also for boiling milk. This is quite important. A separate cook may also be appointed on part-time basis, by collecting one paisa from the beneficiary, as suggested by the Government of India.

9. Since medical checkup is an important ingredient of a health programme, medical check-up should be conducted at least once in two months. The observations of the Medical Officer should be recorded in a register. So far, this has not been done. No time should be lost in implementing this aspect at least in future.

10. Finally, it is pointed out that the, nature of the scheme is such that continuous vigilance is indispensable to see that the food supplied reaches the beneficiaries properly and regularly. Moreover, the articles of supply are such that there is wide scope for adulteration and pilferage en-route. Hence, a whole-time officer should be appointed for overall supervision and physical verification so as to avoid pilferage, adulteration and wastage under the scheme.

APPENDIX I

Location and Distribution Centres 1970-71 and 1971-72

Sl. No.	Name of centre	Number of beneficiaries			
		1970-71		1971-72	
		Children	Mothers	Children	Mothers
(1)	(2)	(3)	(4)	(5)	(6)
1.	Community Hall, Orleanpet ..			300	75
2.	Dubrayapet Boys Hostel ..			200	16
3.	Balwadi, Govindasalai ..			200	50
4.	Municipal School, Davidpet ..	1,000	Nil	200	50
5.	Balwadi, T.V. Nagar ..			250	50
6.	V.T.C. Muthialpet.			200	50
7.	Balwadi, Kurichikuppam ..			200	100
8.	Solainagar, East (from 8.5.71) ..			..	..	200	100
9.	Solainagar, West ..	..	..	200	25
10.	Mathar Sangam, Muthialpet ..	..	..	200	50
11.	Night School, T.V. Nagar ..	..	..	250	50
12.	Kovil, Govindasalai.	..	..	200	50
13.	Ambedkar Nagar ..	..	..	200	50
14.	Balwadi, Dubrayapet ..	..	..	200	50
15.	Marapalam (Dhobikhana) ..	..	..	200	50

APPENDIX I—contd.

Location and Distribution Centres 1970-71 and 1971-72—contd.

Sl. No.	Name of centre	Number of beneficiaries			
		1970-71		1971-72	
		Children	Mothers	Children	Mothers
(1)	(2)	(3)	(4)	(5)	(6)
16.	Vaithikuppam (Temple) .. ..	..	..	200	50
17.	Balwadi, Uppalam. ..	..	..	200	100
18.	Volontariat, Oupalam .. ..	..	..	200	50
19.	Pillaihattam Orphanage .. ..	..	..	200	50
20.	Vivekananda Nagar. ..	..	..	200	50
21.	Kosapalayam Temple .. ..	..	..	200	50
22.	Gandhi Nagar .. ..	..	..	300	50
23.	Thattanchavadi B. Circle .. ..	..	..	200	50
24.	Balwadi, Lawspet .. ..	..	..	200	50
25.	Subramanian Temple, Lawspet .. ..	..	..	200	50
26.	Marie, Mudaliarpet. ..	..	..	200	..
27.	Temple, Mudaliarpet .. ..	..	..	200	50
28.	Manram, Keeralapalayam .. ..	..	..	200	50
29.	Pethuchettipet School .. ..	..	..	200	50
30.	Puthupet .. ..	..	..	200	50
31.	Saram .. ..	..	..	200	50
32.	Thilaspel, Temple. ..	..	..	200	50
33.	Vambakeerapalayam. ..	..	..	200	50

APPENDIX II

Nutritional guide-lines

As children in the age-group of 0—3 years require different types of foods as well as different levels of nutrition, it is proposed to provide the following :—

- (a) 0—1 year Milk and food of semi-solid consistency.
- (b) 1—6 years Giving 200 calories and 12 grams of protein.
Processed/prepared food giving 300 calories and 12 grams of protein.*
- (c) Expectant Mothers. Processed/prepared food giving 500 calories and 20—25 grams of protein and in additional folic acid and iron daily and multi-vitamin tablets on alternate days.
- (d) Nursing Mothers .. Processed/prepared food giving 500 calories and 20—25 grams of protein and multi-vitamin tablets on alternate days.

(*Note.—All preparations must have protein quality at least PER value 2).

The recipe can broadly be categorised as between the tribal areas and the urban areas. In tribal areas, suitable combinations of locally available cereals and pulses may be encouraged. Processed foods may be considered preferably only in the urban areas.

In both the cases, nevertheless, care should be taken to ensure that :

1. The food is commonly acceptable.
2. The recipes are simple and easy to cook.
3. Variations in the diet schedule are available.

Tribal Areas :

0—1 year—Reconstituted skimmed milk (from 1 oz. of dry powder) supplying 8 grams of good quantity protein and about 90 calories.

In addition to milk, each child should also get a soft cereal—pulse preparation like 'Kichiri', supplying 100 calories and 3 grams of protein.

In addition, each child may be given one Vitamin A and D capsule daily.

1—6 years—There are various types of cooked preparations based on locally available foods (please see Appendix II). The recipe should be acceptable and nutritionally adequate.

It will be advisable to give each child one multi-vitamin tablet every alternate day.

For mothers, the quantities may be suitably increased.

Urban Areas :

0—1 year—8 oz. of double toned milk from metropolitan dairies.

OR

8 Oz. of reconstituted milk from 1 oz. of skimmed milk powder.

In addition one slice of bread or 2/3 of sweetened bun could be given.

1—3 years—4 oz. of double toned or skimmed milk and one sweetened bun. It would be advisable to give each child one multi-vitamin tablet on alternate days.

This will not, however, be necessary if the buns are fortified.

For mothers, the quantities may be suitably increased.

Preparations based on Balahar :

As already pointed out, processed food can be considered for distribution in the urban areas.

The Food Ministry and the Education Ministry have recommended balahar in this connection.

On an average 75 grams of balahar will provide 350 calories and 15 grams of protein of good quality and also minerals and vitamins.

In its simplest form balahar can be taken as gruel which can be sweetened to make it more palatable. It can also be converted into several palatable preparations like Uppma, Halwa, etc.

Balahar can also be combined with other palatable processed food like biscuits, etc. The advantage of having balahar is that it will supply most of the needs of minerals and vitamins and no supplement will be necessary.

SPECIMEN RECIPES FOR THE CHILDREN IN THE AGE-GROUP
OF 1—6 YEARS IN TRIBAL AREAS

‘Kichiri’ (Salty)

<i>Ingredients</i>	<i>Quantity</i> G.	<i>Cost</i> P.	<i>Calories</i>	<i>Protein</i> G.
Rice	60	5	198	4.1
Redgram Dal	30	5	95	6.7
Salt and condiments .. .. .	..	1	..	..
	<hr/>	<hr/>	<hr/>	<hr/>
	90	11	293	10.8
	<hr/>	<hr/>	<hr/>	<hr/>

Method :

1. Pick and wash rice and dal. Soak them in little water for one hour or so.
2. Put it on fire. Add salt, haldi etc. Add double the quantity of water in it.
3. When cooked, take off from the fire.

Jra ‘Kichiri’

<i>Ingredients</i>	<i>Quantity</i> G.	<i>Cost</i> P.	<i>Calories</i>	<i>Protein</i> G.
Bajra	60	4	204	7.0
Greengram dal	20	5	95	7.2
Salt and condiments .. .. .	..	1	..	..
	<hr/>	<hr/>	<hr/>	<hr/>
	80	10	299	14.2
	<hr/>	<hr/>	<hr/>	<hr/>

Method :

1. Remove the husk of bajra.
2. Soak it overnight.

3. Soak dal for an hour after washing.
4. Put bajra and dal on fire. Add salt and water.
5. Cook for 20 minutes or so.

<i>Ingredients</i>	<i>Quantity G.</i>	<i>Cost P.</i>	<i>Calories</i>	<i>Protein G.</i>
Bengalgram flour ..	30	5	106	6.8
Wheat flour	30	3	100	3.6
Jaggery	20	4	80	..
Fat	3	1	27	..
	<u>83</u>	<u>13</u>	<u>313</u>	<u>10.4</u>

Method :

1. Roast Bengalgram flour and wheat flour in fat.
2. When properly roasted, put the powdered jaggery in it.
3. Mix properly and form into balls.

Groundnut Candy Sweet

<i>Ingredients</i>	<i>Quantity G.</i>	<i>Cost P.</i>	<i>Calories</i>	<i>Protein G.</i>
Wheat flour	20	2	71	2.4
Bengalgram flour ..	20	3	74	4.5
Groundnut nuts	20	4	112	6.3
Jaggery	20	4	80	..
Fat	3	1	27	..
	<u>83</u>	<u>14</u>	<u>364</u>	<u>13.2</u>

Method :

1. Roast wheat flour and bengalgram flour in little fat separately.
2. Roast groundnuts on a grindle, remove the skin and then break them into smaller pieces.
3. Make syrup out of jaggery.
4. Put syrup in the roasted mixture.
5. Put the groundnuts in the above mixture.
6. Put on a greased plate for setting.
7. Cut into desired shape.

More recipes can be evolved on the same pattern.

Ingredient	Quantity G.	Calories	Protein G.
Wheat flour	20	71	2.4
Bengalgram flour	20	75	4.3
Groundnut nuts	20	112	6.3
Jaggery	20	80	..
Fat	2	27	..
	82	364	13.2