

# Evaluation study of Integrated Child Development Scheme (ICDS) in Tumkur district of Karnataka, India

**N. KUMARA\* AND NEHAL A. FAROOQUEE**

Department of Extension and Development studies, Indira Gandhi National Open University,  
NEW DELHI, INDIA  
(Email : [nkumar278@gmail.com](mailto:nkumar278@gmail.com))

**ABSTRACT :** ICDS (Integrated child development scheme) is one of the best schemes for the improvement of nutritional and health status of children and women in India. In 1972, Planning Commission suggested the implementation of Integrated Child Development Services (ICDS) Scheme in all the States of India. Under this scheme, a package of services, consisting of supplementary nutrition, immunization, health check-up, referral services, health education and non-formal pre-school education is provided to children below 6 years of age and pregnant women and nursing mothers in the age group of 15-45 years in an integrated manner. The government of Karnataka started ICDS in 1976 since then the growth of Anganwadi in Tumkur district has been increased with 100 percentage of immunization reduction in IMR and MMR. The present paper focuses on the implementation of this scheme in Tumkur district in Karnataka.

**KEY WORDS :** MMR, IMR, Immunization, Supplementary nutrition, Implementation

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## INTRODUCTION

Integrated Child Development Scheme or ICDS was launched in October 1975, as a programme of the fifth five year plan of India, to address the problems of persistent hunger and malnutrition especially among children. Since its inception, it is one of the largest programmes for promotion of maternal and child health and nutrition ICDS (2011). ICDS (2009) Children are our most precious resource and nurturing our children is an investment we are making to ensure a brilliant future for our nation. ICDS, which was launched in 1975, provides an opportunity for the holistic development of children from vulnerable backgrounds. A good foundation in early childhood is provided in anganwadi centres functioning

under ICDS, where young children are provided nutritious food, an opportunity for joyful learning through informal preschool education, immunization, and mothers are guided through nutrition and health education to ensure the healthy development of children. It also included awareness building among pregnant and lactating women on pre and post- natal care of children as well as non-formal education and care of children in 03-06 years of age. Education, Health and Nutrition were integrated in one package for the first time in India. ICDS was started initially in 33 blocks in 1975 and the programme has expanded rapidly since then and has currently reached 5,267 blocks covering all parts of India. According to the government, the programme caters to 33.2 million children and 6.2 million pregnant and lactating women.

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\* Author for correspondence

A study conducted by NIPCCD (2009), in the rural ICDS project Chickaballapur, district Kolar, reveals that the Anganwadi Worker's (AWW) is the key front line worker who plays a crucial role in promoting child growth and development Seema (2001). The concept of ICDS is providing a package of services is based primarily on the consideration that the overall impact will be much larger if the different services develop in an integrated manner as the efficacy of a particular service depends upon the support it receives from related services. ICDS has attempted to gear up to the popular holistic vision of a comprehensive intervention programme with a child-centred approach respecting all cultural patterns and diversity, and served as an instrument of change to bridge social inequalities in the society.

#### **The objectives of the ICDS scheme are:**

- To improve the nutritional and health status of the children in the age group 0 to 6 years.
- To lay the foundation for proper psychological, physical and social development of the child.
- To reduce the incidence of mortality, morbidity, and malnutrition and school drop out.
- To achieve effective coordinated policy and its implementation amongst the various departments to promote child development.
- To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

In order to meet the above objectives, ICDS involves in setting up anganawadi centres (AWCs), and these centres serve as platforms to implement the scheme in co-ordination with the functionaries of the health, education, rural development and other related departments. Each Anganawadi covers a population of around 1000 in rural, 1500 in urban and 300 in tribal areas. The anganawadis are meant to provide the following services:

- Supplementary nutrition to the children below 6 years of age and nursing and pregnant mothers from low income families.
- Nutrition and health education to all women in the age group of 15-45 years.
- Immunization of all children less than 6 years of age and immunization against tetanus for all the expectant mothers.
- Health check up, which includes antenatal care of expectant mothers, postnatal care of nursing mothers, care of new born babies and care of all children under 6 years of age.
- Referral services of serious cases of malnutrition or illness to hospitals, upgraded PHCs/Community Health Services or district hospitals.
- Non-formal pre-school education to children of 3-5 years of age.

#### **ICDS in Karnataka state :**

##### *Growth and expansion of ICDS projects in Karnataka :*

Integrated Child Development Scheme in Karnataka began as one of the pilot projects in the Taluk of T. Narasipura in Mysore district. Since then there has been rapid expansion of the ICDS programme in the past two decades. The number of projects increased to 24 by 1979-80 and was spread to 20 districts. Between 1980-81 and 1989-90, 113 projects were added (more than quadrupled). The years 1982-83 and 1989-90 saw rapid expansion, when 29 and 28 projects were sanctioned, respectively. In the next five years, 47 more projects were added to the existing ones.

#### **Anganawadi centres :**

During the year 2000, 39, 993 Anganawadi centres (AWCs) were functioning covering 43.6 lakhs children below 6 years and were serving 7.3 lakhs pregnant women and nursing mothers. In recent years, the child population (0-6 years) has shown a slight decline following increasing practices of small family norms. This is also reflected in the target population of ICDS in Karnataka showing a marginal dip in pregnant mothers and nursing mothers during February 2001 (7.1 lakhs), reporting of lowered number of deaths among infants (821) and children below 5 years (345) and less number of live births (48.2 thousands). During the year 2002, there were 40,133 AWCs functioning and covering a target population of 44, 18,500 children and 7, 38, 493 pregnant women and nursing mothers. At present 61187 AWCs and 3331 mini anganawadi centers are functioning in 204 ICDS projects in the State, covering all the 175 taluks (181 rural projects and 12 tribal and 11 urban projects). During 2012-13, 55.07 lakh beneficiaries availed benefits under the scheme.

#### **Beneficiaries of ICDS :**

##### *Supplementary nutrition programme (SNP) :*

SNP is a key component of the ICDS with infrastructure built to deliver nutrition supplements to children below 6 years and pregnant women and nursing mothers, in order that the infants and children grow to their full physical and mental capacities, have resistance to illness and diseases. The number of child beneficiaries identified is classified on the basis of age groups 0-3 years and 3-6 years, gender, SCs, STs, OBCs, tribal and minorities, pregnant women and nursing mothers.

#### **Nutrition status :**

Improving the conditions of severe and mild malnourished children below 6 years has been the significant goal of ICDS and tremendous efforts have been geared towards the process of raising their conditions from malnourishment to recommended levels of nourishments. Target children have been weighed and measured for height periodically and growth charts prepared to identify the degree or grade of nourishment and monitor the progress of growth.

Children are graded normal, I II, III and IV on the basis of their height and weight against their age. Grade III and IV indicates severely malnourished. Data from the office of the department of women and child development reveal (Table 5) that a decline in the number of severe or grade III malnourished children from 11683 children in 1999-00 to 10991 in 2000-01 and further reduced to 9036 by March 2002.

#### **Immunisation of children :**

Directorate of Health and family Welfare services is totally responsible for the immunisation of children and protecting them against diseases such as tuberculosis, diphtheria, whooping cough, tetanus, polio and measles. The Anganawadi worker works along with the ANMs and LHVs to ensure that children in the AWC and pregnant women in the community are immunised as per schedule. Observations from the statistical data from directorate of health and family welfare services (ICDS wing) show that the percentage of achievement of target in immunisation has been fluctuating over the years 1996-97 to 2001-02. Only during the years 1996-97, 1997-98 and 2000-01 that the achievement levels has been above 70 per cent of targets set for immunization.

#### **Non - formal pre-school education :**

In Anganawadi centres, pre-school activities include non-formal and play way methods of teaching/learning vocabulary, pronunciation, identifying numbers and alphabets. It equips children of the age group 3-6 years for reading and writing readiness during 1999-00 there were 39,833 AWCs providing pre-school education activities for 210 days and covered 6,42,862 boys and 6,39,881 girls. During 2000-01, about 6,48,988 boys and 6,42,926 girls attended the pre-school education activities conducted in 40,093 centres but in 2001-02, although the number of AWCs offering pre-school education rose to 40,133 the number of boys increased to 6,57,940 as against 6,27,872 girls.

#### **Nutritional status of children :**

Nutritional status of children may be assessed in terms of three anthropometrics indicators, *viz.*, weight-for-age, height-for-age and weight-for-height. These three measures are compared with the corresponding median for the international reference population recommended by the World Health Organization and expressed in standard deviation units (z-scores). Children are considered undernourished (severely under nourished) if they fall short of the reference median on any of these measures by more than two (three) standard deviations. Information available from the National Family Health Surveys could be used to assess the status in Karnataka.

#### **Infant mortality rates :**

##### *Infant mortality :*

This index measure the probability of dying before exact

age one Expressed per thousand live births.

##### *Child mortality :*

This is the probability of dying between the first and fifth birthday expressed per thousand live births.

##### *Under-five mortality :*

The probability of dying between birth and exact age five expressed per thousand live births.

Infant and child mortality rates indicate quality of life in the society. All these indicators show improvement between 1992-93 and 1998-99, infant mortality rate in Karnataka (51.5 per 1000 live births) was lower than that of all-India (67.6 per thousand live births). Similarly, child mortality in Karnataka (19.3 per thousand live births) was less than all-India average (29.3 per thousand live births). So was the case with under five mortality rates, which were 69.8 in Karnataka as against 94.9 per thousand live births at the all-India level. The state has remained polio free this year. A declining trend in IMR in Karnataka is seen. The decline is from 67 in 1994-95 to 53 in 2000-01. However this decline is mainly due to the decline in the IMR rates in urban areas. Rural infant mortality rates are quite high compared to urban and it remained more or less constant over the period. Further, it may be noted that there is a decline in the male IMR from 87 in 1981 to 74 in 1991 but with respect to female IMR the decline is negligible *i.e.* From 74 in 1981 to 72 in 1991. This calls for concerns towards Rural and Female mortality rates.

#### **ICDS in Tumkur district :**

There are 4081 Anganawadi centres with one Anganawadi worker and one helper in each centre. There are catering the services of maternal health, Child health and Nutrition. Every 3<sup>rd</sup> Saturday in these Anganawadi centres 'Village Health Day' is conducted by Anganawadi worker, Junior Female Health Assistant, Male and Female Supervisors and There are 9549 self - helps groups which comprises of 30961 SC women and 13166 ST women as a members.

## **METHODOLOGY**

Evaluation Study of Integrated Child Development Scheme (ICDS) In Tumkur district of Karnataka, India was carried out during 2013-14.

250 Mothers (service acceptor) were selected from ten talukas of Tumkur district. Mothers (service acceptor) were selected by proportionate random sampling method from ten taluks (25 from each taluk) were taken as respondents and Data was collected by personal interview method.

Data were also collected from secondary sources of information such as reports of Department of Women and Child Development Department. PRIs and Health and Family welfare Department. Discussions were held with elected

members of Panchayat Raj institution, officials of these Departments, experts and executives, to elicit their views, ideas and opinion on the important issues pertaining to ICDS. The data was collected through personal interview and secondary source was analyzed by using suitable statistical techniques.

### OBSERVATION AND ASSESSMENT

The results from Table 1 indicated that majority (89.20 %) of the respondents were young age group followed by 10.80 per cent were in middle age group and nil in old age group.

**Table 1 : Distribution of respondents according to their age**

| Sr. No. | Category              | Mothers (service acceptor) |            |
|---------|-----------------------|----------------------------|------------|
|         |                       | Frequency                  | Percentage |
| 1.      | Young age (<35 yrs)   | 223                        | 89.20      |
| 2.      | Middle age(36-50 yrs) | 27                         | 10.80      |
| 3.      | Old age (>50 yrs)     | 00                         | 0.00       |
|         |                       | 250                        | 100.00     |

**Table 2: Distribution of respondents according opinion of mothers on ICDS**

| Sr. No. | Category    | Mothers (service acceptor) |            |
|---------|-------------|----------------------------|------------|
|         |             | Frequency                  | Percentage |
| 1.      | Low         | 11                         | 4.40       |
| 2.      | Medium      | 86                         | 34.40      |
| 3.      | High / good | 153                        | 61.20      |
|         |             | 250                        | 100.00     |

### Mothers opinion on ICDS :

It was operationalized as the desire for excellence to attain a sense of personal accomplishment. It was measured with the help of procedure adopted by Chandrapaul (1998). The instrument consisted of six statements and responses obtained on three point continuum namely 'agree', 'undecided' and 'disagree'. A weightage of 3,2 and 1, respectively were assigned to the response categories in the case of positive statements and the scoring was reversed for negative statements. The total score of the respondents was arrived summing up the weightages of responses for each statement. Thus, the total score for each Mother (Service acceptor) on ICDS programmes ranged from 6 to 18. Based on the total score obtained by respondents on ICDS achievement, they were grouped into three categories, keeping the mean and standard deviation as check .Low :  $<X - 1/2 \text{ S.D.}$ , Medium :  $X + 1/2 \text{ S.D.}$ , High :  $>X + 1/2 \text{ S.D.}$ . The findings from Table 3 showed that majority (61.20 %) of the respondents were having good opinion on ICDS programmes and usefulness in reducing the MMR, IMR, immunization, pre-school and mal nutrition followed by 34.40 per cent of women expressed the medium and only 4.40 per

**Table 3 : Key health indicators (source Health Department)**

| Sr. No. | States and India  | MMR (source SRS: 2001 to 2003) | IMR   |
|---------|-------------------|--------------------------------|-------|
| 1.      | India             | 301                            | 58    |
| 2.      | Karnataka         | 228                            | 50    |
| 3.      | Tumkur (DLHS2)    | 106                            | 18    |
| 4.      | Tumkur at present | 79                             | 14.76 |

**Table 4 : Total deliveries and MMR in 2013-14 in Tumkur district**

| Sr. No. | Year and month | 2013-14                  |                 |              |                   | MMR |
|---------|----------------|--------------------------|-----------------|--------------|-------------------|-----|
|         |                | Institutional deliveries | Home deliveries | Total deaths | Total live births |     |
| 1.      | April          | 3173                     | 29              | 1            | 3191              | 31  |
| 2.      | May            | 2835                     | 5               | 3            | 2847              | 105 |
| 3.      | June           | 2808                     | 27              | 2            | 2829              | 71  |
| 4.      | July           | 2967                     | 21              | 2            | 3011              | 66  |
| 5.      | August         | 2861                     | 29              | 2            | 2900              | 69  |
| 6.      | Sept.          | 2865                     | 28              | 3            | 2925              | 103 |
| 7.      | October        | 3305                     | 22              | 3            | 3317              | 90  |
| 8.      | Nov.           | 3007                     | 21              | 2            | 3021              | 66  |
| 9.      | Dec.           | 2898                     | 24              | 3            | 2909              | 103 |
| 10.     | Jan.           | 2886                     | 27              | 4            | 2898              | 138 |
| 11.     | Feb.           | 2874                     | 16              | 0            | 2881              | 0   |
| 12.     | March          | 2889                     | 26              | 3            | 2896              | 104 |
|         | Total          | 35368                    | 275             | 28           | 35625             | 79  |

Source: Health and Family Welfare Department

**Table 5 : Total deliveries and IMR in 2013-14 in Tumkur district**

| Sr. No. | Year and month | 2013-14           |                     |      |        |       |
|---------|----------------|-------------------|---------------------|------|--------|-------|
|         |                | Total live births | Total infant deaths | Male | Female | IMR   |
| 1.      | April          | 3191              | 53                  | 28   | 25     | 16.61 |
| 2.      | May            | 2847              | 28                  | 18   | 10     | 9.83  |
| 3.      | June           | 2829              | 51                  | 20   | 31     | 18.03 |
| 4.      | July           | 3011              | 60                  | 26   | 34     | 19.93 |
| 5.      | August         | 2900              | 41                  | 30   | 11     | 14.14 |
| 6.      | Sept.          | 2925              | 54                  | 28   | 26     | 18.46 |
| 7.      | October        | 3317              | 35                  | 23   | 12     | 10.55 |
| 8.      | Nov.           | 3021              | 33                  | 22   | 11     | 10.92 |
| 9.      | Dec.           | 2909              | 47                  | 27   | 20     | 16.16 |
| 10.     | Jan.           | 2898              | 50                  | 27   | 23     | 17.25 |
| 11.     | Feb.           | 2881              | 40                  | 13   | 27     | 13.88 |
| 12.     | March          | 2896              | 34                  | 17   | 17     | 11.74 |
|         | Total          | 35625             | 526                 | 279  | 247    | 14.76 |

Source: Health and Family Welfare Department

**Table 6a : Immunization (BCG, pento and polio) achievement of Tumkur district**

| Sr. No. | Taluku     | BCG    |            |    | Penta  |            |     | Polio  |            |     |
|---------|------------|--------|------------|----|--------|------------|-----|--------|------------|-----|
|         |            | Target | Achivement | %  | Target | Achivement | %   | Target | Achivement | %   |
| 1.      | Tumkur(U)  | 339    | 1062       |    | 339    | 490        |     | 339    | 490        |     |
| 2.      | Tumkur@    | 498    | 208        |    | 498    | 504        |     | 498    | 504        |     |
| 3.      | Kunigal    | 285    | 148        |    | 285    | 348        |     | 285    | 348        |     |
| 4.      | Pavagada   | 309    | 472        |    | 309    | 394        |     | 309    | 394        |     |
| 5.      | Sira       | 396    | 368        |    | 396    | 504        |     | 396    | 504        |     |
| 6.      | Madhugiri  | 338    | 216        |    | 338    | 405        |     | 338    | 405        |     |
| 7.      | Gubbi      | 331    | 161        |    | 331    | 372        |     | 331    | 372        |     |
| 8.      | Tipatur    | 281    | 367        |    | 281    | 244        |     | 281    | 244        |     |
| 9.      | Turuvekere | 213    | 96         |    | 213    | 209        |     | 213    | 209        |     |
| 10.     | C.N.Halli  | 268    | 161        |    | 268    | 203        |     | 268    | 203        |     |
| 11.     | Koratagere | 212    | 123        |    | 212    | 169        |     | 212    | 169        |     |
|         | Total      | 3470   | 3382       | 97 | 3470   | 3842       | 100 | 3470   | 3842       | 100 |

**Table 6b : Immunization (Measles, T.T. (Mothers), Malnutrition) achievement of Tumkur district**

| Sr. No. | Taluku     | Measles |            |      | T.T. (Mothers) |            |    | Malnutrition |        |
|---------|------------|---------|------------|------|----------------|------------|----|--------------|--------|
|         |            | Target  | Achivement | %    | Target         | Achivement | %  | Moderate     | Severe |
| 1.      | Tumkur(U)  | 339     | 1369       |      | 376            | 774        |    | 1775         | 47     |
| 2.      | Tumkur@    | 498     | 529        |      | 552            | 0          |    | 2286         | 89     |
| 3.      | Kunigal    | 285     | 271        |      | 328            | 241        |    | 1854         | 64     |
| 4.      | Pavagada   | 309     | 391        |      | 356            | 416        |    | 4053         | 67     |
| 5.      | Sira       | 396     | 496        |      | 456            | 460        |    | 3123         | 145    |
| 6.      | Madhugiri  | 338     | 380        |      | 389            | 380        |    | 2527         | 132    |
| 7.      | Gubbi      | 331     | 319        |      | 381            | 272        |    | 2400         | 50     |
| 8.      | Tipatur    | 281     | 249        |      | 324            | 232        |    | 1696         | 101    |
| 9.      | Turuvekere | 213     | 167        |      | 246            | 151        |    | 1278         | 48     |
| 10.     | C.N.Halli  | 268     | 220        |      | 308            | 214        |    | 1880         | 90     |
| 11.     | Koratagere | 212     | 191        |      | 244            | 205        |    | 1801         | 73     |
|         | Total      | 3470    | 3213       | 92.5 | 3960           | 3345       | 84 | 24673        | 906    |

cent of the respondents were expressed the impact of ICDS programmes as low / poor .

To understand the objectives of ICDS in reducing the MMR, IMR, immunization and malnutrition in Tumkur district Karnataka was analyzed. It is evident from the Table 3,4,5,6a and 6b in 2013-14 there were total deliveries of 35643, out of which 35368 *i.e.* 99.22 per cent, were institutional deliveries and 0.77 per cent were home deliveries and MMR was 79 against the 106 of last year and IMR was 14.75 against the last year 18.

Total live births of 35625 in 2013-14, 2.54 per cent *i.e.* 906 children's were severely affected by malnutrition and immunization is almost 97-100 per cent achievement. Shashidhar *et al.* (2012) had also worked on the related topic.

### Conclusion :

The study has clearly shown that Institutional deliveries increased and MMR and IMR significantly reduced to 79 and 14.76 against the last year 106 and 18, respectively. Achievement of immunisation programme was almost 97-100 per cent. The government of Karnataka started ICDS in 1976 since then the growth of Anganwadi in Tumkur district has been increasing with 100 percentage of immunization reduction in IMR and MMR.

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