Chapter V

Summary, Findings & Conclusions
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5.0. Introduction

Children are the bearers of our common future - a future that is in our hands as never before. All children must enjoy the highest attainable standard of health, especially through immunisation, good nutrition and diet, clean water and adequate sanitation, proper housing and a safe and healthy environment. Despite impressive improvements in child health, at the international level, nearly 11 million children under the age of five still die each year. The majority of these deaths could be prevented. The good news is that the number of deaths of children under five has dropped in recent years.

According to UNICEF, (2001) India's population under 5 is 114976 thousands and under 5 mortality rate is 98 (per 1,000 live births), annual no. of under 5 deaths 2400 thousands and presence of children with malnutrition under the category of moderate and severe is 53 percent and severe is 21 percent.

The foundation of successful efforts to defeat malnutrition needs a wide understanding among government ministries, planners, health services, and the public of the true nature of the problem. In particular, we must leave behind the notion that nutrition is simply a matter of food. It should therefore be clear that any large-scale strategy to defeat malnutrition, including improved feeding practices and the prevention and proper treatment of illness, could only be implemented and monitored on a significant scale by parents and communities. It follows that those parents and communities should be seen as active participants in the wide range of actions necessary to defeat malnutrition, and not just as passive recipients of food services. Awareness and assessment of the real problems, analysis of the real causes, and evaluation of the results—these are the essential steps; and they can only be taken by well-informed, well-supported parent and communities. The relationship between nutritional targets and the other goals that have been adopted for the year 2000 is therefore powerfully synergistic: defeating malnutrition would accelerate progress towards the goals of improved child health and reduced child deaths; conversely, advances in the fields of immunisation, safe water supply and basic education would accelerate progress towards the goal to reduce child malnutrition.
Social and economic factors that have been found to influence infant and child survival in many developing countries include parental education, particularly mother’s education, father’s occupation, place of residence and household economic conditions. Studies in many developing countries show that children of uneducated parents are more likely to face higher risks of death than children of educated parents (Fasihul Alam. M, 1998).

5.1. Statement of the Problem

The thrust of the problem is to assess the knowledge, attitude and practice of mothers on child nutrition both from rural and urban area and its impact on nutritional status of the child. Malnutrition is widely prevalent in India. Nearly two-thirds of India’s population is on a nutritionally deficient diet. Several surveys have shown that a large number of people eat less food than they need, the worst sufferers being pregnant women, lactating mothers and children. Malnutrition is not exclusively due to non-availability of nutritious food. Failure to use the available resources in a meaningful manner can be another cause. This is mainly due to lack of knowledge of the value of foods in relation to the needs of the individual. Ignorance plays a great role in the rejection of low cost, locally available nutritious foods. Hence the present study aims at identifying the existing levels of knowledge, attitude and practice on child nutrition among the rural and urban mothers and also assess the nutritional status of the child belongs to the selected subjects of the study.

5.2. Objectives of the Study

5.2.1 To find out and compare the socio-economic characteristics, demographic and mass media exposure variables among the selected rural and urban mothers in the study area

5.2.2 To ascertain and compare the levels of knowledge, attitude and practice of rural and urban mothers on child nutrition
5.2.3. To assess the nutritional status of the child in selected rural and urban areas and compare that with that of the nutritional knowledge, attitude and practice of their mothers

5.2.4. To assess the inter-relationship among knowledge, attitude and practice on child nutrition of rural and urban mothers.

5.2.5. To suggest the nutritional concepts that have to be given emphasis in the nutritional education of the mothers on the basis of the major findings / major outcomes of the present study

5.3. Hypotheses

Keeping the objectives of the present study in view, the following null hypotheses have been formulated for testing.

Hypothesis - 1

There will be no significant association between the selected socio-economic characteristics (Age, Caste, Educational Status, Husband's Support in Child Rearing and Time Spent for Interacting with Child) and the knowledge, attitude and practice of the respondents on child nutrition both in rural and urban area

Hypothesis - 2

There will be no significant difference between the religion and occupation and knowledge, attitude and practice of the respondents on child nutrition both in rural and urban area

Hypothesis – 3

There will be no significant relationship between the monthly income of family and monthly expenditure for food & medicine and knowledge, attitude and practice of the respondents on child nutrition both in rural and urban area
Hypothesis – 4

There will be no significant association between the selected demographic variables (Age at Marriage, Age at the Time of Child Birth, Family Type, Family Size, Number of Female Members in the Family, Child’s Birth Order and Spacing between Births) and knowledge, attitude and practice of the respondents on child nutrition both in rural and urban area

Hypothesis – 5

There will be no significant difference between the different mass media variables (Newspaper, Magazine, Radio, Television, Movie and Other Print Media) and knowledge, attitude and practice of the respondents on child nutrition both in rural and urban area

Hypothesis – 6

There will be no significant association between the respondents’ participation in nutritional programmes and obtaining information from health workers and knowledge, attitude and practice on child nutrition both in rural and urban area

Hypothesis – 7

There will be no significant difference between the respondents who belong to rural and urban areas with regard to their knowledge, attitude and practice on child nutritional concepts (Breast-Feeding, Supplementary Feeding, Nutrients, Nutritional Deficiency Diseases, Nutritional Status and Immunisation)

Hypothesis – 8

There will be no significant relationship between the overall gain scores of knowledge, attitude and practice on child nutrition and the nutritional status (Height, Weight, Mid Arm Circumferences and Fat Fold Thickness) of the child of the selected respondents both in rural and urban area
Hypothesis – 9

There will be no significant inter – relationship between the knowledge, attitude and practice of the respondents on child nutrition among the selected rural and urban area

5.4. Variables of the Study

On the basis of review of earlier studies and literatures in the area of child nutrition, the researcher has identified the following variables for the present study.

5.4.1. Independent Variables

- Knowledge on Child Nutritional Concepts
- Attitude towards Child Nutritional Concepts
- Practice on Child Nutritional Concepts

- Nutritional Status of the Child
  a. Height
  b. Weight
  c. Mid Arm Circumference
  d. Fat Fold Thickness

5.4.2. Dependent Variables

- Socio-Economic Related Variables
  a. Nature of Area
  b. Age of the Respondent
  c. Religion
  d. Caste
  e. Educational Status
  f. Occupation of the Respondent
  g. Monthly Income of the Respondent
  h. Monthly Income of the Family
  i. Monthly Expenditure for Food
  j. Monthly Expenditure for Medicine
  k. Movable Assets
  l. Immovable Assets
  m. Sex of the Child
  n. Age of the Child
• Demographic Related Variables
   a. Age at Marriage
   b. Age of the Mother at the Time of Child (1-3 year) Birth
   c. Family Type
   d. Family Size
   e. Number of Adult Female Members in the Family
   f. Birth Order of the Child
   g. Spacing between Child Births
   h. Immunisation Status
   i. Deformities
   j. Morbidity during Previous Fortnight.
   o. Husband’s Support in Rearing the Child
   p. Time Spent to Interact with the Child.

• Mass Media Related Variables
   a. Reading News Papers
   b. Reading Magazines
   c. Listening to Radio Programmes
   d. Watching Television
   e. Seeing Movies
   f. Other Print Media
   g. Attending Nutritional Programmes
   h. Attending Folk arts Programmes Related to Nutrition
   i. Obtaining Information from Health Workers

• Other General Variables
   a. Availability of Nutrition Centre
   b. Availability of ICDS Centre
   c. Availability of Hospital
   d. Supplementary Food from Nutritional Centre

5.5. Methodology

5.5.1. Research Design
To assess the knowledge, attitude and practice of rural and urban mothers on child nutrition and to assess the nutritional status of their children in Tiruchirappalli district, which is located in Tamil Nadu state, has been selected. The present investigation is based on Survey Method and it is designed to suit the objectives framed for the study.
5.5.2. Sampling Frame

Since this is a comparative study, the urban and rural area have been chosen from the study area Tirucirappalli district in Tamil Nadu state. For urban, out of sixty wards in Tiruchirappalli City Corporation, four wards were selected based on the information obtained from the Integrated Child Development Service. For rural, Thiruverumbur block, which is one of the fourteen blocks in Tiruchirappalli district has been selected, from which out of twenty eight villages two villages have been selected, based on the information obtained from the Tamil Nadu Integrated Nutrition Project using multi-stage random sampling method. The sample thus consists of 400 respondents (each 200 from rural and urban) i.e., mothers having child of one to three years. It is 9 per cent, out of the total universe both from rural and urban area. The sampling frame has been well explained in chapter- III of the present study.

5.5.3. Construction of Tools

For the purpose of the study, the researcher has constructed an interview schedule which covers the following instruments: a. Instrument to collect personal data of the subjects b. Instrument to measure the knowledge of the subjects on child nutrition c. Instrument to measure the attitude of the subjects on child nutrition d. Instrument to measure the practice of the subjects on child nutrition e. Instrument to measure the nutritional status (Height, Weight, Mid arm circumference and Fat fold thickness) of the respondent’s child, which has been elaborately discussed in chapter III.

5.5.4. Statistical Techniques Adopted

The data collected were carefully analysed and processed. Statistical tools such as mean, standard deviation, correlation coefficient, ‘Z’ test and chi-square test were applied to test the hypotheses of the study and to interpret the data to draw meaningful inferences.
5.6. Findings

5.6.1. General Findings

The study has revealed the socio-economic background of the respondents in the study area. The following are the general findings of the study:

- In the study area most of the respondents both from rural and urban area come under the age group of 21 – 25 years (58 % and 50 % respectively). And most of the respondents (76 % in rural and 59 % in urban area) are getting married in the age group of 15 – 20 years. Majority of the respondents (around 53 % and 59 % in rural and urban respectively) have given birth to child in the age group of 21 – 25 years.

- Over 77 % of the respondents both from rural and urban area belongs to Hindu religion, and around 53 % of the respondents in rural and 84 % in urban area belong to the caste group of Backward Caste.

- Existence of illiteracy is more in rural area when compared to urban area (25 % in rural and 8 % in urban). The respondents around 19 % in urban and 6 % in rural area have gone for higher education such as higher secondary, graduation and post graduation. Majority of the respondents from the study area are house - wives (82 % in rural and 90 % in urban).

- Around 56 % of rural and 67 % of urban respondents are living in nuclear families. And most of the respondents from the study area has 4 – 6 members in their family and most of the (62 % in rural and 73 % in urban) families has no adult female members such as mother-in-law, sister-in-law and other relatives.

- Majority of the respondents both in rural and urban area are getting family monthly income in between Rs.1251 – 2000/- (45 % in rural and 42 % in urban). Only 17 % of rural and 22 % of urban respondents are getting monthly family income above Rs.3501/-. And most of the respondents from rural and
urban area (68 % and 49 % respectively) spend Rs.500 – 1000/- for their family average monthly expenditure for food. And majority of the respondents both from rural and urban area spend more than Rs.100 for their family average monthly expenditure for medicine.

- In the study area most of the respondents have cycle (75 % in rural and 40 % in urban), radio (75 % in rural and 56 % in urban) and television (36 % in rural and 66 % in urban). Around 56 % of the respondents in rural and only 10 % of the respondents in urban area have own houses.

- TINP – Nutrition Centre and ICDS Centres are located in both rural and urban study area. Over 37 % of the respondent’s children are getting benefit of these centers. Most of the respondents both in rural and urban area responded that hospital is located near to their places of stay.

- The percentage of the respondents who are getting information on health / nutrition aspects with regard to different mass media are presented here: Newspaper 26 % in rural and 28 % in urban, Magazine 18 % in rural and 30 % in urban, Radio 40 % in rural and 38 % in urban, Television 46 % in rural and 70 % in urban, Movie 10 % in rural and 18 % in urban, Other Print Media 42 % in rural and 68 % in urban, Participating in the Nutritional Programmes 17 % in rural and 23 % in urban and Obtaining Information from Health Workers 55 % in rural and 44 % in urban.

- Majority of the respondents’ husbands both in rural and urban area (84 % in rural and 87 % in urban) are supporting the respondents in rearing their children. And most of the respondents (91 % in rural and 96 % in urban) both from rural and urban area spend more time to interact with their children.

- Most of the respondent’s children (57 % in rural and 59 % in urban) are male child when compared to female child and most of them (54 % in rural and 59 % in urban) are coming under the age group of 12 – 24 months both in rural and urban area.
• The study reveals that around 38% of rural and 48% of urban respondent’s children are the first child and around 31% and 37% of the respondent’s children are the second child in rural and urban area respectively. Around 27% and 29% of the respondent’s children are having intervals between birth of 3 years and above in rural and urban area respectively. And cent percent of the respondent’s children were immunized against the major vaccine preventable diseases such as Diphtheria, Poliomyelitis, Tetanus, Tuberculosis and Whooping cough, except the disease Measles (97% in rural and 98% in urban) both in rural and urban area.

5.6.2. Nutritional Concept – Wise Findings

• The study reveals that the knowledge on child nutritional concept – nutritional deficiency diseases is low among rural respondents. Urban respondents possess high level of knowledge on all the child nutritional concepts such as breast-feeding, supplementary feeding, nutrients, nutrition deficiency diseases, nutritional status and immunisation when compared to rural respondents.

• Both rural and urban mothers have less favourable attitude towards child nutritional concept – immunisation when compared with other nutritional concepts like breast-feeding, supplementary feeding, nutrients, nutrition deficiency diseases and nutritional status. And urban mothers have high favourable attitude towards the concepts supplementary feeding and rural mothers have high favourable attitude towards the concept breast-feeding.

• The study shows that the mother’s nutritional practice on the concept nutrients and nutritional deficiency diseases are comparatively low with other concepts such as breast-feeding, supplementary feeding, nutritional status and immunisation. Practice on nutritional status is very low in both rural and urban area.
5.6.3. Hypotheses Related Findings

The following are hypotheses related findings of the study: The findings are ordered according to the statistical test applied such as chi-square, Z test and correlation.

5.6.3.1. Association between the Selected Socio – Economic Characteristics and the Respondent’s Knowledge, Attitude and Practice on Child Nutrition both from Rural and Urban Area.

(a) Rural:

- There is a significant association existing between the age (Table: 4.42) and educational status (Table: 4.44); and the knowledge of the respondents on child nutrition in rural area. A study conducted by Sudha Rani. K, (1987) also found that the age of the respondents has influence on the total nutritional knowledge, she also found that the respondents belonging to forward castes have more knowledge on nutrition than those belonging to non-forward caste.

- There is a significant association existing between the husband’s support in child rearing (Table: 4.50) and time spent for interacting with child (Table: 4.51); and the attitude of the respondents towards child nutrition in rural area.

- There is a significant association existing between the educational status (Table: 4.54) and husband’s support in child rearing (Table: 4.55); and the practice of the respondents on child nutrition in rural area. Similar findings have been reported in an article published in WHO’s (1998) Health Link Worldwide.

- There is no significant association existing between the caste, husband’s support in child rearing and time spent for interacting with child; and the knowledge of the respondents on child nutrition in rural area.
• There is no significant association existing between the age, caste and educational status; and the attitude of the respondents towards child nutrition in rural area. Contrary to this finding, the study conducted by Kusuma, D.L, (1987) has found positive association between socio-economic status and attitudes towards nutrition.

• There is no significant association existing between the age, caste and time spend for interacting with child; and the practice of the respondents on child nutrition in rural area. A study conducted by Sreedevi. V, (1997) reported that the age has not influenced significantly the practices of nutrition among adult instructors.

(b) Urban:

• There is a significant association existing between the caste (Table: 4.43) and educational status (Table: 4.44); and the knowledge of the respondents on child nutrition in urban area. A study conducted by Mohanthy. J, (1991) found that literate mothers could contribute more to the promotion of general awareness of their children than their illiterate counterparts.

• There is a significant association existing between the caste (Table: 4.48), educational status (Table: 4.49) and husband’s support in child rearing (Table: 4.50); and the attitude of the respondents towards child nutrition in urban area. A study conducted by Sreedevi. V, (1997) found that educational status of the adult instructor has significant influence on knowledge, attitudes and practices of nutrition.

• There is a significant association existing between the caste (Table: 4.53) and educational status (Table: 4.54); and the practice of the respondents on child nutrition in urban area. Contrary to the present study, Ratnakumari. C.H, (1996) found that from her study that all the mothers are found to have better awareness and low practices concerning health, nutrition and education.
• There is no significant association existing between the age, husband’s support in child rearing and time spent for interacting with child; and the knowledge of the respondents on child nutrition in urban area. A study conducted by Singh M.B and Kaur. S, (1981) revealed that the urban mothers interaction was related to each mother’s educational level.

• There is no significant association existing between the age and time spent for interacting with child; and the attitude of the respondents towards child nutrition in urban area.

• There is no significant association existing between the age, husband’s support in child rearing and time spent for interacting with child; and the practice of the respondents on child nutrition in urban area.

5.6.3.2. Difference between the Selected Socio – Economic Characteristics and the Respondent’s Knowledge, Attitude and Practice on Child Nutrition both from Rural and Urban Area.

(a) Rural:

• There is a significant difference existing between occupation (Table: 4.58) and the knowledge of the respondent on child nutrition in rural area. But in contrary, the study of Dewalt. K and Pleto. G, (1978) indicates there is no relationship between occupation and knowledge of nutrition. But a study conducted by Sims. S.L, (1976) revealed that higher occupational group had better knowledge of nutrition than the lower occupational group.

• There is a significant difference existing between religion (Table: 4.59) and occupation (Table: 4.60); and the attitude of the respondent towards child nutrition in rural area.

• There is a significant difference existing between occupation (Table: 4.62) and the practice of the respondent on child nutrition in rural area.
• There is no significant difference existing between religion and the knowledge of the respondent on child nutrition in rural area.

• There is no significant difference existing between religion and the practice of the respondent on child nutrition in rural area. Contrary to the study result, the study conducted by Arora, D.D and Kawal, K.K, (1973) found that Christians and Hindus introduce solid foods at the earliest rather than Muslims.

(b) Urban:

• There is a significant difference existing between occupation (Table: 4.60) and the attitude of the respondent towards child nutrition in urban area.

• There is no significant difference existing between religion and occupation; and the knowledge of the respondent on child nutrition in urban area.

• There is no significant difference existing between religion and the attitude of the respondent towards child nutrition in urban area.

• There is no significant difference existing between religion and occupation; and the practice of the respondent on child nutrition in urban area.

5.6.3.3. Relationship between the Selected Socio – Economic Characteristics and the Respondent's Knowledge, Attitude and Practice on Child Nutrition both from Rural and Urban Area.

(a) Rural:

• There is a significant relationship existing between the family monthly income (Table: 4.63) and the knowledge of the respondents on child nutrition in rural area.
• There is a significant relationship existing between the family monthly income and monthly expenditure for food and medicine (Table: 4.64); and the attitude of the respondents towards child nutrition in rural area.

• There is a significant relationship existing between the family monthly income (Table: 4.65) and the practice of the respondents on child nutrition in rural area. Similar findings emerged in a study conducted by Shrivastava. P.L., (1998), in which he found that the mothers belonging to low-income group affects the feeding practice on child nutrition. Supporting these results, a study conducted by Helga Piechulek, et-al., (1999) revealed that income influences the feeding practices of mothers in rural Bangladesh.

• There is no significant relationship existing between the monthly expenditure for food and medicine and the knowledge of the respondents on child nutrition in rural area.

• There is no significant relationship existing between the monthly expenditure for food and medicine and the practice of the respondents on child nutrition in rural area.

(b) Urban:

• There is a significant relationship existing between the family monthly income and monthly expenditure for food and medicine (Table: 4.63); and the knowledge of the respondents on child nutrition in urban area.

• There is a significant relationship existing between the family monthly income and monthly expenditure for food and medicine (Table: 4.64); and the attitude of the respondents towards child nutrition in urban area.

• There is a significant relationship existing between the monthly expenditure for food and medicine (Table: 4.65) and the practice of the respondents on child nutrition in urban area.
• There is no significant relationship existing between the family monthly income and the practice of the respondents on child nutrition in urban area.

5.6.3.4. Association between the Demographic Variables and the Respondent’s Knowledge, Attitude and Practice on Child Nutrition both from Rural and Urban Area.

(a) Rural:

• There is a significant association existing between the presence of adult female member in the family (Table: 4.77) and the attitude of the respondents towards child nutrition in rural area.

• There is no significant association existing between the selected demographic variables such as age at marriage, age at the time of child birth, family type, family size, number of female members in the family, child’s birth order and spacing between births; and knowledge of the respondents on child nutrition in rural area. Contrary to this, a study conducted by Sims. S.L, (1976) revealed that the family size was negatively related to nutritional knowledge. It means families with small size has better nutritional knowledge than families with large size.

• There is no significant association existing between the demographic variables such age at marriage, age at the time of child birth, family type, family size, child’s birth order and spacing between births and attitude of the respondents towards child nutrition in rural area.

• There is no significant association existing between the selected demographic variables such as age at marriage, age at the time of child birth, family type, family size, number of female members in the family, child’s birth order and spacing between births and practice of the respondents on child nutrition in rural area. Contrary to this, a study conducted by Rao (1971) stated that families with three or less children
were observed to have better intake of calories and protein than families with four or more children.

(b) Urban:

- There is a significant association existing between the demographic variables such as age at marriage (Table: 4.66), presence of adult female members (Table: 4.70) and birth order (Table: 4.71) and the knowledge of the respondents on child nutrition in urban area.

- There is a significant association existing between the family type (Table: 4.75) and the attitude of the respondents towards child nutrition in urban area.

- There is a significant association existing between the demographic variable birth order (Table: 4.85) and practice of the respondents on child nutrition in urban area.

- There is no significant association existing between the selected demographic variables such as age at the time of childbirth, family type, family size and spacing between births and knowledge of the respondents on child nutrition in urban area. On contrary to this study, the study conducted by Sreedevi. V, (1997) found that the family size of the adult instructor had significant influence on knowledge, attitude and practice of nutrition.

- There is no significant association existing between the demographic variables such as age at marriage, age at the time of child birth, family size, presence of adult female member, child’s birth order and spacing between births and attitude of the respondents towards child nutrition in urban area.

- There is no significant association existing between the selected demographic variables such as age at marriage, age at the time of child birth, family type, family size, number of female members in the family
and spacing between births and practice of the respondents on child nutrition in urban area.

5.6.3.5. **Difference between the Mass Media Variables and the Respondent’s Knowledge, Attitude and Practice on Child Nutrition both from Rural and Urban Area.**

(a) Rural:

- There is a significant difference existing between the different mass media variables (Newspapers, Magazines, Radio, Television and Other Print Media) (Table: 4.87) and knowledge of the respondents on child nutrition in rural area except the variable Movie. The findings of Lamp, (1999) and Ravichandran. R, (1995) also got the same results.

- There is a significant difference existing between the different mass media variables such as newspapers, magazines, radio, television and other print media (Table: 4.89) and the respondent’s practice on child nutrition in rural area except the variable movie. A study conducted by Reddy. P.A, (1990) also found from his study that there is a significant influence exists between the knowledge of the respondents who are exposure to mass media such as press, radio, motion pictures and television.

- There is no significant difference existing between the mass media variables such as newspapers, magazines, radio and television and attitude of the respondents towards child nutrition in rural area.

(b) Urban:

- There is a significant difference existing between the different mass media variables (Newspapers, Magazines, Radio, Television, Movie and Other Print Media) (Table: 4.87) and knowledge of the respondents on child nutrition in urban area.
• There is a significant difference existing between watching movie (Table: 4.88) and the attitude of the respondents towards child nutrition in urban area.

• There is a significant difference existing between the mass media variables such as magazines, television, movie and other print media (Table: 4.89) and the practice of the respondents on child nutrition in urban area.

• There is no significant difference existing between the mass media variables (Newspapers, Magazines, Radio, Television and Other Print Media) and the attitude of the respondents towards child nutrition in urban area.

• There is no significant difference existing between listening / reading newspapers (Table: 4.89) and the practice of the respondents on child nutrition in urban area.

5.6.3.6. Association between the Mass Media Variables and the Respondent’s Knowledge, Attitude and Practice on Child Nutrition both from Rural and Urban Area.

(a) Rural:

• There is a significant association existing between the mass media variables such as nutritional programmes attended and nutritional information obtained from health workers (Table: 4.91) and the respondent’s attitude towards child nutrition in rural area.

• There is a significant association existing between the nutritional information obtained from health workers (Table: 4.92) and the respondent’s practice on child nutrition in rural area.

• There is no significant association existing between the mass media variables such as nutritional programmes attended and nutritional
information obtained from health workers and the respondent’s knowledge on child nutrition in rural area.

- There is no significant association existing between the variable nutritional programmes attended and the respondent’s practice on child nutrition in rural area.

(b) Urban:

- There is a significant association existing between the nutritional programmes attended (Table: 4.90) and the respondent’s knowledge on child nutrition in urban area.

- There is a significant association existing between the mass media variables such as nutritional programmes attended and nutritional information obtained from health workers (Table: 4.91) and the respondent’s attitude towards child nutrition in urban area.

- There is a significant association existing between the nutritional programmes attended (Table: 4.92) and the respondent’s practice on child nutrition in urban area.

- There is no significant association existing between the nutritional information obtained from health workers (Table: 4.90) and the respondent’s knowledge on child nutrition in urban area.

- There is no significant association existing between the nutritional information obtained from health workers and the respondent’s practice on child nutrition in urban area.
5.6.3.7. Difference between the Respondents Who Belongs to Rural and Urban Areas with Regard to their Knowledge, Attitude and Practice on Child Nutrition

- There is a significant difference existing between the respondents who belong to rural and urban areas with regard to the knowledge on child nutritional concepts such as supplementary feeding, nutrients, nutritional deficiency diseases and nutritional status.

- There is a significant difference existing between the respondents who belong to rural and urban areas with regard to their Attitude towards child nutritional concepts such as Breast – Feeding, Supplementary Feeding, Nutrients, Nutritional Deficiency Diseases, Nutritional Status and Immunisation. A similar study conducted by Sharma. D.B, et-al., (1977) revealed that the mother’s beliefs on nutrition have a significant influence on immunisation status of their children.

- There is a significant difference existing between the respondents who belong to rural and urban areas with regard to their practice on child nutritional concepts such as Supplementary Feeding, Nutrients, Nutritional Deficiency Diseases, Nutritional Status and Immunisation except the concept Breast – Feeding. Supporting this result a study conducted by CINI, (1999) found that the mothers practice on breast – feeding concepts is poor. A study conducted by Vijayalakshmi. G, (1996) found the mother’s attitude towards nutrition has a significant influence on nutrition practice on supplementary feeding. A study conducted by Ferry, (1981) reported that the length of breast – feeding among the wives of farm workers was very much longer than the wives of white – collar workers.
• There exists no significant difference between the knowledge of rural and urban respondents on the child nutritional concepts such as breast-feeding and immunisation. A study conducted by Rao, (1975) pointed out that there is a significant relationship exists between the respondent’s knowledge and immunisation status of their children.

5.6.3.8. Relationship between the Child’s Nutritional Status and the Respondent’s Knowledge, Attitude and Practice on Child Nutrition in Rural and Urban Area.

(a) Rural:

• There is no significant relationship existing between the respondent’s knowledge on child nutrition and the nutritional status in relation to height, weight, mid arm circumference and fat fold thickness in rural area. On contrary, a study conducted by Ali, (1992) stated that an individual’s nutrition is determined by nutritional knowledge.

• There is no significant relationship existing between the respondent’s attitude towards child nutrition and the nutritional status in relation to height, weight, mid arm circumference and fat fold thickness in rural area.

• There is no significant relationship existing between the respondent’s practice on child nutrition and the nutritional status in relation to height, weight, mid arm circumference and fat fold thickness in rural area. On contrary, the study conducted by Helga Piechulek, et-al., (1999) and Mukta Agrawal and Ritu Bhargava, (2000) revealed that mothers feeding practices affects the nutritional status of the child. A study conducted by Anjali Pattanaik, (1994) revealed that the urban children were of better health status than their rural and slum counterparts, and rural children had better physical development than slum children.
(b) Urban:

- There is a significant relationship existing between the respondent’s knowledge on child nutrition and the nutritional status with regard to height and weight (Table: 4.96) in urban area.

- There is a significant relationship existing between the respondent’s practice on child nutrition and the nutritional status of the child in relation to weight (Table: 4.98) in urban area. A study conducted by Kailash Choubey, (1998) and Mukta Agrawal and Ritu Bhargava, (2000) found that the prevalence of rigid and unhealthy dietary practices affects the nutritional status of the children. A study conducted by Hays, M and Emmons, L, (1973) noted that the nutritional practices of mothers were better than their knowledge on nutrition. He also found that some nutritional practices were subjected to modification without gain in knowledge and positive change in attitudes.

- There is no significant relationship existing between the respondent’s knowledge on child nutrition and the nutritional status in relation to mid arm circumference and fat fold thickness in urban area.

- There is no significant relationship existing between the nutritional status (Height, weight, mid arm circumference and fat fold thickness) of the child and the respondent’s attitude towards child nutrition in urban area.

- There is no significant relationship existing between the respondent’s practice on child nutrition and the nutritional status of the child in relation to height, mid arm circumferences and fat fold thickness in urban area.
5.6.3.9. Inter-Relationship between the Respondent’s Knowledge, Attitude and Practice on Child Nutrition in Rural and Urban Area.

- A significant inter-correlation exists between the variables knowledge, attitude and practice on child nutritional concepts such as breast-feeding, supplementary feeding, nutrients, nutrition deficiency diseases, nutritional status and immunisation among the rural and urban respondents. A study conducted by Mary Sujatha. A, (1978) and Vasanthakumari. K, (1979) found that there is a positive correlation exists between knowledge and nutritional practice of rural mothers. According to Ratnka. C.H, (1996) the mothers are found to have better awareness and low practices concerning health, nutrition and education.

5.7. Consolidated Results of the Study

For early reference, a birds-eye-view of the hypotheses related findings are presented in a nutshell through the tables 5.1, 5.2 and 5.3.
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Independent Vs Dependent Variables</th>
<th>Statistical Significance</th>
<th>Hypothesis No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K</td>
<td>A</td>
</tr>
<tr>
<td>1</td>
<td><strong>Socio-Economic Variable Vs Knowledge / Attitude / Practice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age of the Respondent</td>
<td>Sig*</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Religion</td>
<td>N.S.</td>
<td>Sig*</td>
</tr>
<tr>
<td></td>
<td>Caste</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Educational Status</td>
<td>Sig**</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Occupation of the Respondent</td>
<td>Sig**</td>
<td>Sig**</td>
</tr>
<tr>
<td></td>
<td>Monthly Income of the Family</td>
<td>Sig*</td>
<td>Sig**</td>
</tr>
<tr>
<td></td>
<td>Monthly Expenditure for Food &amp; Medicine</td>
<td>N.S.</td>
<td>Sig**</td>
</tr>
<tr>
<td></td>
<td>Husband's Support in Rearing the Child</td>
<td>N.S.</td>
<td>Sig**</td>
</tr>
<tr>
<td></td>
<td>Time Spent to Interact with the Child</td>
<td>N.S.</td>
<td>Sig*</td>
</tr>
<tr>
<td>2</td>
<td><strong>Demographic Variables Vs Knowledge / Attitude / Practice</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Age at Marriage</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Age of the Mother at the Time of Child (1-3 year) Birth</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Family Type</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Family Size</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Number of Adult Female Members in the Family</td>
<td>N.S.</td>
<td>Sig*</td>
</tr>
<tr>
<td></td>
<td>Birth Order of the Child</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Spacing between Child Births</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

K – Knowledge  A – Attitude  P – Practice  N.S. – Not Significant  Sig – Significant (* 0.05 & ** 0.01)
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Independent Vs Dependent Variables</th>
<th>Statistical Significance</th>
<th>Hypothesis No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td><strong>Mass Media Variables Vs Knowledge / Attitude / Practice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reading News Paper</td>
<td>Sig**</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Reading Magazines</td>
<td>Sig**</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Listening to Radio Programmes</td>
<td>Sig**</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Watching Television</td>
<td>Sig**</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Seeing Movies</td>
<td>N.S.</td>
<td>Sig*</td>
</tr>
<tr>
<td></td>
<td>Other Print Media</td>
<td>Sig**</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Attending Nutrition Programmes</td>
<td>N.S.</td>
<td>Sig*</td>
</tr>
<tr>
<td></td>
<td>Information from Health Workers</td>
<td>N.S.</td>
<td>Sig*</td>
</tr>
<tr>
<td>4</td>
<td><strong>Nutritional Status of the Child Vs Knowledge / Attitude / Practice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Height</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Mid Arm Circumference</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Fat Fold Thickness</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

**K** – **Knowledge**      **A** – **Attitude**      **P** – **Practice**

**N.S.** – Not Significant   **Sig.** – Significant (* 0.05 & ** 0.01)**
Table: 5.02. Difference between Rural and Urban Respondent’s KAP on Child Nutritional Concepts

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Dependent Variables</th>
<th>Statistical Significant on Child Nutritional Concepts</th>
<th>Overall Significance</th>
<th>Hypothesis No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge</td>
<td>N.S. Sig** N.S. Sig** N.S. Sig** N.S. Sig**</td>
<td>Sig**</td>
<td>7a</td>
</tr>
<tr>
<td>2</td>
<td>Attitude</td>
<td>Sig** Sig** Sig** Sig** Sig** Sig** Sig**</td>
<td>Sig**</td>
<td>7b</td>
</tr>
<tr>
<td>3</td>
<td>Practice</td>
<td>N.S. Sig** N.S. Sig** N.S. Sig** N.S. Sig**</td>
<td>Sig**</td>
<td>7c</td>
</tr>
</tbody>
</table>


N.S. – Not Significant  Sig** - Significant at 0.01 level

Table: 5.03. Inter-Correlation between Dependent Variables (Knowledge, Attitude & Practice)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Dependent Variables</th>
<th>Statistical Significance</th>
<th>Hypothesis No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Inter – Correlation</td>
<td>Sig** Sig** Sig** Sig**</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Knowledge Vs Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge Vs Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attitude Vs Practice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sig** - Significant at 0.01 level
5.8. Discussions and Conclusions

The present study on knowledge, attitude and practice of rural and urban mothers on child nutrition has enabled the researcher to embark upon a detailed discussion and meaningful conclusions by carefully interpreting the findings that have emerged through the enquiry.

Carol Bellamy, (2001) Executive Director of the United Nations Children's Fund on the launch of the State of the World's Children 2001, has stated that, “129 million babies around the world begin an extraordinary developmental sprint - from defenceless new-borns to pro-active 3-year-olds. And every year, countless numbers of them are stopped in their tracks - deprived, in one way or another, of the love, care, nurturing, health, nutrition and safe environment that they need to grow, develop - and to learn”. He has also stated further that, “11 million young children die every year from preventable causes; 170 million children are malnourished; over 100 million children never see the inside of a school; and 1 out of every 10 children have disabilities. And that is just a partial accounting of the human potential that we allow to be squandered”.

The need to protect and nurture children in early childhood should merit the highest priority when governments make decisions about laws, policies, programmes and money. Yet, tragically, both for children and for countries, these are the years that receive the least attention. It includes the basic premise that caring for the child means supporting the crucial role of parents and families in ensuring the right of all children to grow up in a safe stable and nurturing environment.

Education and information for behaviour changes are being increasingly recognised as key interventions in the improvement of health and nutrition. However, functional illiteracy, the lack of infrastructure, and expensive technology often mean that efforts in health and nutrition communication at the community level are minimal, difficult, and disappointing.
We have a long road to travel. But early attention to the well being of the world's children, especially in their earliest years, is the most direct route to assure their future - and of all the generations to come.

Venkatasubramanian. K, (2001) member, Planning Commission of India, in his recent and vital note appeared in The Hindu, dated on 4th December 2001 under the caption Education & Poverty states that investing in women's education results in substantial social and economic gains. Educated women have fewer children. In South Asia, women with no education have seven children on average; women with at least seven years of education have fewer than four children. Educated women have healthier children; in Africa, one out of five if the mother has no education; the probability is more than halved for children whose mothers have seven years of education. Educating women has a stronger positive effect on children's health than educating men. He also noted that mothers are also much more closely involved in the immediate care of children and in the critical decisions about food, sanitation and general nurturing, all of which influence children's health and development. Longer spacing between births leads to healthier children. He also emphasized that education provides women with greater opportunities for employment and income, and raises the opportunity cost of their time in economic activities compared to child rearing. Such economic gains motivate families to have fewer children. The vicious cycle of high birth rates, high maternal and infant mortality and endemic poverty have been transformed into a virtuous circle through investment in human capital enhancing labour productivity, reducing fertility and mortality, raising economic growth and thus securing domestic resources for further investments in people.

In this context, the present study has endeavoured to provide certain relevant information in the area of rural and urban mother's knowledge, attitude and practice of child nutrition and its impact on child's nutritional status, which was emerged in the consolidated findings presented in the tables 5.1, 5.2 and 5.3 would help to find out the alternative solutions to the problems.
The present study has revealed that the younger age groups (21 – 25 years) of mothers possess high knowledge on child nutrition when compared to other age groups in rural area. But it has no influence on their attitude and practice towards child nutrition. The variables, respondent’s age at marriage, age at the time of childbirth and spacing between childbirths has no significant association between the knowledge, attitude and practice of the respondents on child nutrition both from rural and urban area. The birth order of the child has a significant influence on knowledge and practice of the mothers in urban area. This is because most of the respondents in urban area have their child (1-3) in the order of second and above. So they got previous experience in rearing their child. Whereas in rural area, eventhough the respondents have previous experience, illiteracy and lack of awareness on child nutritional concepts affect their knowledge, attitude and practice of the respondents on child nutrition. Family monthly income has a significant influence on the child nutritional practice of the respondents. Faulty ideas and food fallacies should be changed through educating the mothers. Mothers should be informed with the foods rich in nutrients, which are available at cheaper cost. The nutritional institutions such as ICDS centres and TINP nutrition centres and health departments such as PHC and health sub centres, which are located in and around the rural and urban area should disseminate these information through the health/nutrition workers by means of issuing pamphlets, notice bits or through orally. The notice should be prepared as wall stickers. By sticking these notices at the individual houses the literate mothers can get benefit out of it. For illiterate mothers the information should have to be printed in picture format. The local NGOs may help in disseminating these to the targeted people.

The present study revealed that majority of the respondents from rural and urban area is housewife (82 per cent and 90 per cent respectively). In rural area there exist a significant difference between the respondents who are employed and house wife. The mean value indicates that the respondents who are housewives have more knowledge when compared to those who are employed. This is because the nature of work is agricultural where there is no chance of getting information related to nutritional concepts. Whereas in urban area most of the respondents are housewife so there exists
no significant difference between these variables. The variable average monthly expenditure for food and medicine have a significant influence on knowledge, attitude and practice of the respondents in urban area. This is because the urban respondents spend more for food and less for medicines, which is due to the educational status of urban mothers, which in turn helping them to choose the right foods.

The respondents who have studied above 6th standard and have higher education qualifications have got high knowledge and attitude scores and adopting good practice on child nutrition and this is appreciable. Further, the study has revealed that a significant percentage of the respondents belonging to S.C. and S.T. caste group show less knowledge, unfavourable attitude and low practice on child nutrition when compared to other caste groups. As the weaker sections had been suppressed and oppressed from ancient times, their literacy level and standard of living are very low. With the concept of equality of educational opportunity as one of the national objectives, free India has been initiating a lot of development. Eventhough these people have an access to education in recent times, they are lagging behind other society people in attaining the literacy level. Thus policy makers and planner should give priority to these communities who are underprivileged sections of the society, especially women among them.

Supporting the above findings World Education Forum, (2000) stated “globally the number of literate adults more than doubled from 1970 to 1998 from 1.5 billion to 3.3 billion. But while the overall adult literacy rate has risen to 85 per cent for men and 74 per cent for women, illiteracy rates remain too high, especially female illiteracy. At least 875 million adults remain illiterate, two-thirds of them women which is exactly the same proportion as the years ago, it also noted that persistence of gender gap as a major obstacle as 60 percent of world’s out-of-school children are girls”.

According to the Census, (2001) report, in India the female literacy rate is only 54.16 per cent when compared to 75.85 per cent for male. Thus the government should implement more schemes, which may in turn motivate the parents to send their female children to school. Other than giving free bus pass, uniforms, books and food, the
government should give 50 per cent reservation to female instead of 30 per cent. This may help to change the attitude of the people that educating female children is not a mere waste. The importance of female literacy has also to be projected to the mass through various mass media such as newspapers, magazine, television, radio and film shows etc. intensively.

The study has revealed that, more than 50 per cent of the respondent’s husbands both from rural and urban areas are not supporting their wives in rearing their child. They think that this is the work of the female parent. This attitude should be changed. The male parent should be given education on child nutrition with special emphasis on nutrients and its deficiency diseases and importance of immunising the child. This may influence the knowledge, attitude and practice of mothers both in rural and urban areas. In American countries when a woman is pregnant both the parents should go for counselling and should attend the classes taken on subjects such as risk of pregnancy, caring and rearing the child, importance of immunising the child, food for lactating mothers, food for children and role of male parents in the family etc. This creates a healthy environment for the child to grow. This method should be adopted in India. The doctors should advice the mothers to bring their husbands while coming for regular check ups.

It is clear from the present study that all the respondents are aware of the availability of nutritional centres in their area. But most of them are not getting benefit out of it since majority of the respondents have their child in the age group of 12-24 months, since the minimum age for availing the benefit of nutritional centers organised by ICDS and TINP is 3 years. According to WHO, (1999) “young children are at the great risk of undernutrition between the ages of six months and three years. Inadequate feeding is one of the immediate causes of undernutrition. Supplementary foods are foods given in addition to breast milk (or breast milk substitutes). They can be specially prepared foods (transitional foods) or family foods. Infants need supplementary foods, in addition to breast milk, about four to six months. Health workers and mothers should discuss together about the feeding frequency and the types and amounts of foods to give”. Thus the age for getting supplementary food
may be reduced to 1 year. The policy makers and programme implementers may reconsider this, since the first 36 months of a child's life is very important, when neural connections in the brain are at a crucial stage, ready to be developed through social and physical interactions and enriched by good nutrition and health.

According to the following speakers who delivered speeches at a State - level consultation on the Integrated Child Development Services organised by Department of Social Welfare, (published in The Hindu 11th December 2001) the Secretary, Women and Child Welfare Department, New Delhi Dr. R. V. Vaidyanatha stated that, an expansion of the ICDS programme in terms of coverage was contemplated in the 10th Five - Year Plan. This was also quoted by Gupta. D.P, who conducted a study on implementation of the ICDS throughout the country, said that Tamil Nadu was one of the states whose performance was appreciable, but he insisted that, it was necessary to freeze expansion in terms of food supplementation for non-needy areas and increase coverage for poor families. Mr. P. Shanker, Chief Secretary, Tamilnadu emphasised that it was also important to identify the deficiencies and concentrate on setting them right, he also stated that pre – school children, who where the ICDS target, were a crucial group deserving special attention.

It is heartening to note that the respondent’s children were fully immunised (100 per cent) against the major 6 vaccine preventable diseases (diphtheria, poliomyelitis, tetanus, tuberculosis, wooping cough and measles) both in rural and urban area. This shows the effective implementation of the immunisation programmes both in rural and urban area. The NFHS, (1998 –99) noted that the percentage of the children belong to the age group of 12 – 23 months coming under the category of fully immunised in Tamil Nadu state are 88.8 per cent, where as for the whole country it is only 42 per cent. The success of the immunisation programme in Tamil Nadu is due to the cent percent coverage of the target population during the camps by the health workers and services oriented associations / organisation like Rotary Clubs, Lions Clubs, National Service Scheme, Non – Governmental Organisations, different Communication Channels and Development Departments etc. This has to be continued until our country fully eradicates all the vaccine preventable diseases.
spending more time with the respondents in cooking and rearing their child. Thus these members may also be included while conducting meeting for the mothers. In general, the study revealed that the variables family type and family size has no significant influence on knowledge, attitude and practice of both rural and urban respondents on child nutrition. This is because in the joint family system the members present are not aware of the child nutritional concepts, and most of the respondent’s husbands are not involving in child rearing process. Another reason is most of the respondents both from rural and urban area (56 per cent and 67 per cent respectively) is belongs to nuclear family.

The respondents feel that the health worker’s visit especially from nutritional institution such as TINP and ICDS is not adequate. They are expecting more from them. But most of the health workers themselves are not known with child nutritional concepts like supplementary feeding, nutrients, nutrition deficiency diseases, nutritional status and immunisation. Thus priority should be given in developing trainers and supervisors before starting to train the caretakers. Usually the health/ nutrition workers undergo training during their appointments only for 3 months. This may not be enough since they are the one who are working for the targeted people for a long period. Thus refreshing courses have to be conducted for the workers at least every six months to retain their knowledge on nutritional concepts. While recruiting, priority should be given for the nutrition graduate instead of appointing them on the basis of seniority. Currently most of the supervisors have appointed with not much background knowledge on nutrition. Then only the health workers can implement the targeted aims and objectives of the nutritional programmes in an effective and efficient manner.

The present study revealed that the respondent’s attending nutritional programmes organised by various nutritional institutions are very low. This shows that the institutions are not organising programmes related to the child nutrition frequently. The nutritional institutions should conduct mothers meeting once in a week. Information on child nutritional concepts such as breast – feeding, supplementary feeding, nutrients, nutrient deficiency diseases, nutritional status and immunisation
should be given to both rural and urban mothers and their family members. This may help them to gain a good knowledge on child nutrition, which may influence them to have favourable attitude and practice towards child nutrition. The example from the United Kingdom and Ireland illustrate the parents and health workers involvement in child development. The original work in Bristol was launched experimentally in 1980 as a training programme to enable health visitors – highly trained community nurses – to acquire an insight into their work which went beyond the essential health steps that the new mother should take in her own interest and in the interests of other child. Particular attention was paid to health during monthly visits on a set of carefully determined tasks related to many aspects of the child’s development. After each visit, a ‘contract’ was established between mother and visitor over what should occur in the interval between visits. A detailed study shows that target families record major changes in their home environments, compared with control groups, and changes are being perceived as well in the developmental levels of the children whose mothers are involved in the programme. ‘Project’ children are enjoying healthier diets; they suffer less from health problems and have fewer visits to the doctor; and they enjoy a better relationship with their parents.

Another example of Day Care Centres in Singapore where the parents are regarded as partners in the care and education of young children. They work closely with the day care staff on common objectives. They try to strengthen the link between the home and the day care centre, seeking to develop a better understanding and skills in working with the children. They also seek to provide a network of support for parents with common concerns such as child management, family relationships and pressures of work on the child and the parents. Parents organise themselves in various sub-committees to achieve these objectives. The activities range from organising parent education workshops to sharing experiences with new and anxious parents to conducting dance and art classes. Parents are not mere recipients; they are active participants. These methods may be adopted here subject to suitability of the area and the region in the nutrition centres and if the health workers follow this strategy the programmes may attain its goal.
On the whole the study shows that there is a significant difference existing between the knowledge, attitude and practice of rural and urban mothers on child nutritional concepts: Breast-feeding, supplementary feeding, nutrients, nutritional deficiency diseases, nutritional status and immunisation. The study reveals that the respondent’s practice on child nutritional concept, breast-feeding is low in rural and urban area. In rural areas the mothers are not aware of the importance of feeding colestrum (the first milk from the breast) to the child. They still believe that colestrum is something that has to be discarded. In urban areas the mothers stop breast-feeding their child at the age of 1 year. This has to be changed. UNICEF, (2000) strongly supports breast-feeding because it can save children’s lives - at least 1.5 million a year - and because it is one of the best-known ways to support early childhood development. NFHS, (1998–99) noted that in India, the children between the age group of 0–33 months exclusively breastfed on the whole country is 55.2 per cent, in urban it is 40.9 per cent and in rural it is 58.8 per cent. In Tamil Nadu the percentage of children comes under exclusively breastfed are only 48.3 per cent. The advantages of breast-feeding particularly importance of colestrum and minimum age for breast feeding has to be given with more priority while organising nutritional education programmes.

The study reveals that the mother’s knowledge, attitude and practice on child nutritional concept such as nutrients, nutrient deficiency diseases and nutritional status are low when compared to other concepts. The rural and some of the urban mothers are not aware of the major nutrients such as carbohydrate, protein, fats, vitamins and minerals and the foods rich in these nutrients. Nutrient deficiency leads to malnutrition. The mothers are not aware of the nutrient deficiency diseases such protein – calorie malnutrition, anemia, night blindness, dental diseases, Iodine deficiency disease cretinism etc. According to UNICEF, (2001) in India the presence of children with malnutrition as indicated by moderate and severe is 53 per cent and severe is 21 per cent. According to NFHS, (1998–99) report on Children and Youth of India, estimated 39.7 per cent, 29.4 per cent and 19.9 per cent children under the age of 3 years are malnourished as indicated by underweight, stunted and wasted respectively. This ultimately affects the growth of the child i.e. nutritional status of
the child. Thus immediate attention has to be given to educate mother on these child nutritional concepts. The nutrition education curriculum must include the different types of nutrients such as carbohydrates, protein, fats, vitamins and minerals and the foods rich in these nutrients should be listed, and the deficiency diseases occurred due the improper intake of nutrients should be incorporated. The health workers should get throw of these subject first and they should disseminate these information to the mothers.

The researcher’s recommendation coincides with the country’s current recommendation which is pointed out in the Tenth Five Year Plan, (2002-2007) approach paper that, currently the major nutrition-related public health problems are chronic energy deficiency micronutrient deficiencies, such as anaemia due to iron and folic acid deficiency, vitamin A deficiency, Iodine deficiency disorders, chronic energy excess and obesity and associated health hazards. It also states that, as a tenth plan strategy, efforts have to be made to move from un-targeted food supplementation to fully operationalising growth monitoring, including screening pre-natal women, in order to identify onset under-nutrition and initiate appropriate health and nutritional interventions. It also emphasised the necessary step is to move from treatment of infection when children are brought, to prevention, early detection and management of infections through improved access to health care, which would prevent any deterioration in the nutritional status of children. The study also indicated that the knowledge and practice on child nutrition of the respondent in urban has a significant influence on the child’s nutritional status with regard to height and weight. Whereas in rural area the child nutritional knowledge, attitude and practice of the mothers has no influence on the nutritional status of their child. This is because to some extend the nutritional status of the child depends on the heredity and their morbidity during previous fortnight.

The ‘Child-to-Child’ programme, pioneered in the United Kingdom and Jamaica and ‘Child Helping Child’ in Chile which are adopted in many developing countries, are designed for children who are usually between the ages of 8 and 15 and often, at one and the same dine, caretaker of younger siblings, future parents, communicators of
information to their parents and other caretakers, and community members, capable of improving conditions affecting health and development. In developing countries the youngest children pay the highest price in terms of illness. All are, to a greater or lesser extent, subject to prevention or alleviation by public health education. Children are receptive to new ideas and have abundant energy to pass them on and apply them. If they are taught sound health principles, they are better able to look after the younger children in the family, carry new ideas into the home and help to reach out-of-school children. The curriculum provides information about health, nutrition, psychosocial development and dental care. An evaluation of the programme revealed that the children improved significantly in their knowledge of all areas. In addition, the knowledge of parents and guardians improved as did their encouragement and support of play with younger children.

An article published in The New Indian Express, (2001) dated on 7th December on ‘Food for Learning — Mid day meals, not day light robbery’ states that, though the mid day meal programme helps retain children in school while providing them valuable nutrition, the school drop out rates are extremely high in this country. The government’s decadal review of the status of children, the percentage of kids reaching the fifth grade has increased only by a couple of decimal points from 57.2 to 57.4 between 1990 and 2000. It also stated that the delivering the food in the form of dry provisions, has often found their way to the local market or the homes of the school authorities rather than to the children it was meant for. It also pointed out that one the greatest challenges facing the country is the task of feeding its 380 million children adequately, the problem is still basic about protein-calorie intake rather than about micronutrient deficiencies’. To prevent this, the programme implementers should take severe action against the workers who are misusing the provisions. They should be severely punished and should remit fine for the misuse.

It is heartening to note the official release published in The Hindu, (2001), dated on 22nd December 2001, that the Tamil Nadu government has revived the “Dr.J. Jayalalitha 15 – point programme” for women and children, but rechristened it “Tamil Nadu 18 – point programme” which include, i. Eradication of female foeticide and
infanticide, ii. Ensuring eight years of schooling for every child, raising the literacy levels of women, elimination of child labour, iii. Providing safe drinking water and sanitary facilities in all schools and child care centres.

The study reveals that WHO's call of "Health for All by 2000 A.D." was not fully achieved. Even though there is a decline in mortality rates, still that exist all over the country. To reach the goal we need some more years to pass. Effective implementation of nutritional programmes and educating the mothers and health workers on child nutritional concepts, we can attain the goal with in few more years. Programmes such as 'Child-to-Child' in United Kingdom and in Jamaica and 'Child Helping Child' in Chile and way of day care centres running in Singapore are some of the good models for us to follow, wherever applicable. If we adopt these models and follow the suggested modifications, discussed in the previous pages, in the existing programmes, attaining WHO's call is no more a long process. The findings of the study will definitely benefit the planners, policy makers, project managers, health workers etc. who are directly involved in mother and child health and nutrition activities.

Thus improving the child's status is an approach that includes a broader definition of care than what we have used in the past, one that encompasses the practices and actions not just of a child's mother or health-care worker, but the entirety of a child's world - his or her home and family, community, country and culture. The future of any nation is directly linked to the future of its children - and by investing in children and in the families that sustain them; a nation is ultimately investing in its own development.

5.9. Suggestions

5.9.1. For Policy Makers

- While reviewing the Five – Year Plans it is found that the fund allotted for health and nutrition has been reduced in the consecutive plans. The Government shall consider it appropriate to increase this amount
The government may give 50 per cent reservation for female, which may motivate the parents to send their female child to school.

While recruiting health workers priority should be given for the nutrition graduates.

Various programmes organised in foreign countries such as “Child – to – Child”, “Child Helping Child” and Day Care Centre running in Singapore are some of the good models for us to follow. Such programmes may be tried here.

Since the first 36 months of the child’s life is very important, the age for getting supplementary food by ICDS and TINP centres should be reduced to 1 year.

5.9.2. For Field Functionaries

The health workers should be given effective training and refresher courses at least for six months to retain their knowledge on nutritional aspects.

Health workers should frequently visit the field area and they should conduct meetings regularly and should make the mothers to watch health/nutrition related programmes. The adult female members in the family should also be included while conducting mothers meetings.

Health workers and doctors should conduct meetings for the male parent.

Frequency of telecasting or broadcasting programmes on health/nutrition in the mass media should be increased.

5.9.3. For Further Research

The Knowledge, Attitude and Practice on Child Nutrition among Tribal Mothers can be studied.
Study of Knowledge on Child Nutrition among Health Workers of ICDS (Integrated Child Development Service) or TINP (Tamil Nadu Integrated Nutrition Project) may be undertaken.

Environmental Factors Affecting the Child Nutritional Practice of Mothers living in Urban Slums may be done.

The Nutritional Education needs of Rural Mothers may be assessed.

Role of Male Parent on Child Nutritional Practice may be studied.

Mother's Attitudes towards Natural Foods and Artificial Food and its impact on Child's Nutritional Status may be studied.

Knowledge, Attitude and Practice of Working and Non-Working Mothers of Urban community may be done.