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A study to assess the socio demographic profile of anganwadi children in Trivandram district, Kerala, India

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Abstract
Aim: To assess the socio demographic profile of anganwadi children in Trivandrum district, Kerala, India.
Sample: Ninety children attending the anganwadi centers in the age group of two to six years were studied.
Study Design: A random study was done to assess the socio demographic profile of children (2-6 years) attending anganwadi centers in the Urban 2 project areas of Trivandrum district, Kerala. Children were selected randomly from sector 1 and sector 4. Data collected were compared with the standard values to find the disparities.
Locale of study: Sectors I and IV in the Urban II project areas of Trivandrum district in Kerala was randomly selected for study.
Methodology: In order to achieve the objectives, socio demographic variables of the respondents namely age, religion, caste, ordinal position, education and occupation of parents, monthly incomes, house condition etc. were collected using pretested questionnaire.
Results: A sizeable portion of male child (35.00%) were under the age category of 24-36 months and female child in age group of both 37-48 months and 49-60 months (34.00%). Birth weight of children were collected from their mothers and found that 11.6% of male children and 13% of female children in the study population were having a lower birth weight i.e. less than 2500gm. Majority of children (48.88%) were from the families having a monthly income of less than or equal to 20,000.
Conclusion: Children with their birth weight less than 2500gram need to be cared and should carefully note there anthropometric measurements. Since they are more prone to malnutrition, illness etc. throughout their life cycle. More than half (58.90%) of the mothers of the children were graduate and a large percent of mothers were not working. Children from low income group need special attention since they may be deprived from nutrient rich foods.

Keywords: Anganwadi children, socio demography, profile, age, education, parents

1. Introduction
Children hold the future of our nation. Child wellbeing reveals how a country guards and feeds its vulnerable members. Globally, indicators of child well-being are used to know the developmental status of different countries [1].

Age, gender, family structure, number of children etc. are the socio demographic features that can likely determine disease related factors at the early stages of the life cycle [2]. Study conducted by Bhandari and Chhetri (2013) exposed that malnutrition is influenced by certain factors such as, poor socio economic status, mothers age less than 20 or greater than 35, gap less than two years between two pregnancies, late supplementary foods, incomplete immunisation and lack of timely care. Socio demographic profile of an individual is relevant for the country.

Results of a study conducted by Spilsbury *et al.,* (2006) demonstrated that, lower socio economic status is one of the independent risk factor for respiratory diseases in children. A cross sectional study conducted by Srivastava *et al.,* (2012), found that children living in joint families are more prone to the risk of malnutrition, and also children whose mothers education are less than or equal to 6th standard and those of working mothers. Mishra (2000) found that, social and educational status of mother, availability of food and safe water accessibility are

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significant as determinants that cause malnutrition among children directly or indirectly.

Socio economic status of a person is important in his productive accomplishments [7]. In this context an attempt is made to study the socio demographic profile of children in the anganwadi centres of Trivandrum district. Socio economic status influences the growth pattern of the child.

2. Materials and methods
2.1 Location of Study
The present study was conducted in Trivandrum Urban Project II. 175 anganwadi centers are there in this project which is further subdivided into five sectors. From the five sectors under the Urban Project No: II, sector I and IV was selected randomly.

2.2 Selection of the respondents
90 preschool children in the age group of 2-6 years were selected purposively from the two sectors under the urban project center II for assessing the socio demographic profile.

2.3 Design of the study
Due to the organized and fast happening style the interview technique is reflected to be the most trustworthy method for data gathering. 90 mothers of the child (2-6 years) beneficiaries were interviewed using questionnaire to elicit information on the socio demographic profile.

In the hand of a researcher the tool can be well defined as an apparatus for determining the variables relating to the study. The details related to socioeconomic status and food consumption pattern of the family were collected with the help of a structured questionnaire. The information on the socio economic variables of the respondents namely age, religion, caste, ordinal position, education and occupation of parents, monthly incomes, house condition etc. were collected using pretested questionnaire.

Present investigation were undertaken after getting the consent from ICDS district officer Mrs. Sabeena mam.

3. Results
3.1 Socio economic status of the children
Questions on socio demographic parameters will be helpful to catch the basic level of information related to the study sample and help to analyze each person individually [8].

3.1.1 Age and Gender
Age and gender wise distribution of children are presented in the Table 1.

As summarized in the Table1 ninety children in the study population attending anganwadies were classified gender wise into five age groups. 35 per cent of the children in the age group of 24-36 months were males and 32 per cent were females. In the age group of 37-48, 28 per cent were male children and 34 per cent were female children. 28 per cent male children and 34 per cent of female children came under the age group 49-60 months. Only 9 per cent male children were in the category of above 60 months.

Table 1: Distribution of children according to age and gender.

Age group (month)	Males	Females	Total
24-36	15 (35.00)	15 (32.00)	30 (33.30)
37-48	12 (28.00)	16(34.00)	28 (30.00)
49-60	12(28.00)	16(34.00)	28 (30.00)
Above 60	4 (9.00)	0	4(4.40)
Total	43 (100.00)	47 (100.00)	90 (100.00)

Values in parenthesis indicates percentage

3.1.2 Socio demographic characteristics
As revealed in the Table 2, children belonging to Hindu community were predominant (81.10%) and among them 20.00 percent were schedule caste, 22.20per cent were from other backward caste, and whereas major portion (38.80%) of children were from general category. 13.30per cent and 5.60per cent of children were under the Muslim and Christian community respectively. 66.67per cent of children were from the families in APL category and 33.30 per cent were categorized under BPL category. 65.60per cent of children were living in their own houses and the other 34.40per cent of children were in rented houses.

Table 2: Socio demographic characteristics of the Anganwadi children.

A. Religion and Caste	Number of children
Total Hindus	73 (81.10)
Scheduled caste	18 (20.00)
Other Backward Caste	20 (22.20)
General	35 (38.80)
Muslims	12 (13.30)
Christians	5 (5.60)
B. Possession of Public Distribution Card	
APL	60 (66.67)
BPL	30 (33.30)
C. Details of residence	
Own house	59 (65.60)
Rented house	31 (34.40)

Values in parenthesis indicates percentage

3.1.3 Ordinal position of respondents
Details related to the ordinal position of the children surveyed are presented in the Table 3.

Table 3 depicted that 29.00per cent of the children in the age group of 24-36 months, 33.00per cent of children in the age group of 37-48 months, 31.00per cent of the children in the age group of 49-60 months and 7.00per cent of the children above 60 months were the first children. 40.00per cent of children in the age group 24-36 months, 29.00per cent of children in the age group 37-48 months and 31.00per cent of children in the age group 49-60 months was second children.

Table 3: Ordinal position of Anganwadi children.

Age group (month)	I st child	II nd child
24-36	16 (29.00)	14 (40.00)
37-48	18 (33.00)	10 (29.00)
49-60	17(31.00)	11(31.00)
Above 60	4 (7.00)	0
Total	55 (100.00)	35 (100.00)

Values in parenthesis indicates percentage

3.1.4 Birth weight of children
Birth weight wise classification of anganwadi children are presented in the Table 4.

Table 4: Classification of Anganwadi children based on birth weight

Birth weight	Boys	Girls	Total	SD
Normal (> or = 2500gm)	38(88.40)	41(87.00)	79 (87.80)	±.83
Low (< 2500gm)	5 (11.60)	6 (13.00)	11 (12.20)	±.11
Total	43 (100.00)	47 (100.00)	90 (100.00)	

Values in parenthesis indicates percentage

As revealed in the Table4, 88.40per cent of male children and 87.00per cent of female children were under normal category having a weight greater than or equal to 2500gm of weight. 11.60per cent of male children and 13.00per cent of female

children had their birth weight less than 2500gm and hence they were categorized under low birth weight children.

3.1.5 Mode of delivery
Distribution of children based on mode of delivery is presented in the Table5. As indicated in the table 5, 74.40 per cent of the mothers had normal delivery while 25.50per cent of the child deliveries were caesarean.

Table 5: Mode of delivery of Anganwadi children

Category	Number of children
Normal	67 (74.40)
Caesarean	23 (25.50)

Values in parenthesis indicates percentage

3.1.6 Socio demographic details of the parents
Socio demographic details of the parents surveyed is presented in the Table 6.

Table 6: Socio demographic profile of parents

Parameters	Percentage distribution of parents	
	Father	Mother
A. Education		
SSLC	20 (22.20)	9 (10.00)
HS	27 (30.00)	24 (26.70)
Graduate	43 (47.78)	53 (58.90)
Post graduate	0	4 (4.40)
B. Occupation		
Laborer	22 (24.40)	0
Self-employment	11 (12.20)	2 (2.20)
Government job	28 (31.10)	3 (3.30)
Private job	29 (32.20)	7 (7.78)
Not working	0	78 (86.70)
C. Income (Rs)		
10,000-20,000	39 (43.30)	5 (5.60)
21,000-30,000	29 (32.20)	5 (5.60)
31,000-40,000	13 (14.40)	2 (2.20)
Above 40,000	9 (10.00)	

Values in parenthesis indicates percentage

Table 6 shows the educational status, occupation and income level of parents (both father and mother). As revealed in the table 22.20per cent of fathers and 10.00per cent of mothers were having SSLC as their higher educational qualification. 30.00per cent of fathers and 26.70per cent of mothers were having higher secondary education. Forty seven per cent fathers and 58.90per cent of mothers were graduates. Four per cent of mothers were having post graduate level as their educational qualification and no father comes under this category.

Regarding the occupation of fathers 24.40per cent were laborers, 12.20per cent were self-employed, 31.10per cent had government jobs, 32.20per cent had private jobs, and none of the fathers were reported to be jobless. About the occupational status of mothers 2.20per cent of mothers were self-employed, 3.30per cent were government workers, and 7.78per cent worked in private sectors. A significant percent of mothers (86.70%) of mothers were not working. Results on the income level of the family reveals that majority of the study population (43.30%) were having a monthly income of less than Rs 20,000.

4. Discussion
4.1 Socio economic status of the children
Socio demographic profile is a significant determinant of health, nutritional status as well as mortality and morbidity [9]. Socio economic status of 43 male and 47 female children in the age group of 2-6 years were assessed. A sizeable portion of male child (35.00%) were under the age category of 24-36

months and female child in age group of both 37-48 months and 49-60 months (34.00%).

An epidemiological study conducted by Yadav and Yadav (2016) described that female children are more nutritionally deprived than males. Almost half of Indian children under five are underweight, and girls being affected more.
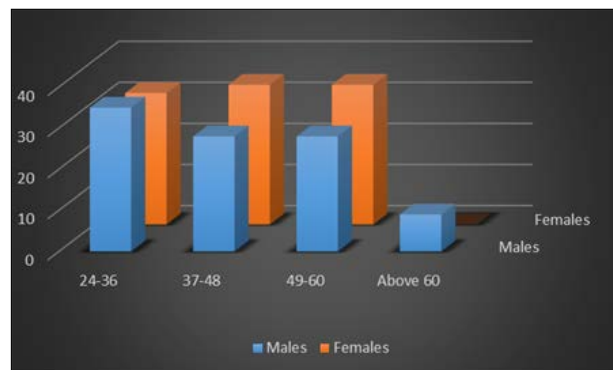

Fig 1: Age Group of Anganwadi children

Majority of children (73.00%) were in the Hindu caste. Fifty nine per cent of children were living in their own house and 60.00% are in APL category.

55 children in the study population was first child, 35 children were second child and no child were there born after two kids. Related study conducted by Mishra and Rutherford (2005), proposed that parents care less towards first child when a new child is need. They may be in need of particular nutritional needs at that time. Availability of food also decreases. Children with more number of siblings in their families are more likely to be suffered from malnutrition.
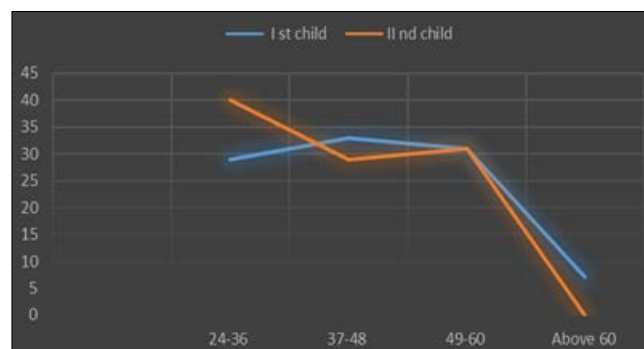

Fig 2: Ordinal position of Anganwadi children

Birth weight of children were collected from their mothers and found that 11.6% of male children and 13% of female children in the study population were having a lower birth weight i.e. less than 2500gm. Wang *et al.*, (2020), reported that the risk of being underweight ad malnourished is more for children with a lower birth weight.
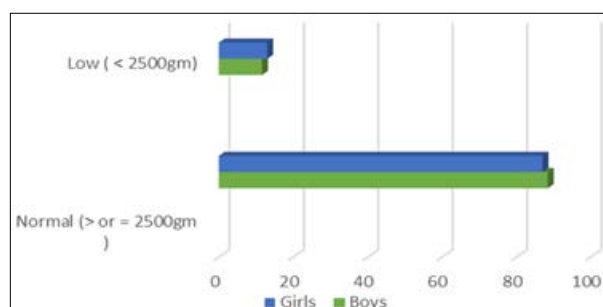

Fig 3: Birth weight of Anganwadi children

Data on the type of delivery of children shown that 25.5% of children have caesarean birth. Studies conducted by Larco *et al.,* (2015) observed that on the risk of cesarean birth and child nutritional status probability for the development of over weight is more for caesarean type of delivery. But proper care and consultations can prevent that through interventions. Low birth weight is an important contributor for infant mortality. They are more likely to suffer from growth retardation and illness throughout their life cycle [14]. Therefore they require special care and attention in the anganwadies.
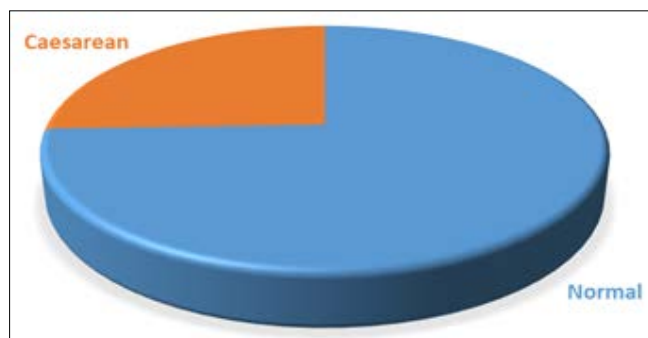

Fig 4: Delivery Mode

More than half (58.9%) of the mothers of the children were graduate and a large percent of mothers were not working. Only 13.3% of mothers were working women. Chauhan (2015), in his study pointed out that educational qualification of mother is important in the nutritional status of child. The chance to have under nourished children is less for a more educated mother than the other. Mukuria *et al.* (2005) identified that, there is decline in the cases of stunting by mother's education in many developing countries.

Majority of children (48.88%) were from the families having a monthly income of less than or equal to 20,000. A study conducted by Stefanie *et al.,* (2007), indicated that lower educational status of parents and lower family income affects food intake of children. Intake of fruits, cooked vegetables, milk etc. were diminished. Even though with an increase in the income the overall outcomes of children were also improving. Women's employment status increases the family income, and study done by Abbi *et al.,* (2011) suggested that job of mother and child nutritional status are positively related.

5. Conclusion
Birth weight of children were collected from their mothers and found that 11.60 per cent of male children and 13.00 per cent of female children in the study population were having a lower birth weight. Children with their birth weight less than 2500gram need to be cared and should carefully take there anthropometric measurements. Since they are more prone to malnutrition, illness etc. throughout their life cycle. More than half (58.90%) of the mothers of the children were graduate and a large percent of mothers were not working.

Majority of children were from the families having a monthly income of less than or equal to 20,000. Children from low income group need special attention since they may be deprived from nutrient rich foods.

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