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A PROFILE OF RURAL GIRLS OF PARBHANI DISTRICT

BY

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B.Sc.(Home Science)

DISSERTATION

**SUBMITTED TO THE MARATHWADA AGRICULTURAL
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REQUIREMENT FOR THE DEGREE OF MASTER OF
HOME SCIENCE**

IN

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**DEPARTMENT OF CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS
COLLEGE OF HOME SCIENCE
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PARBHANI.**

1993

CANDIDATE'S DECLARATION

I, hereby declare that the dissertation
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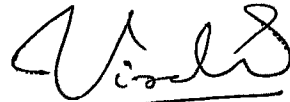
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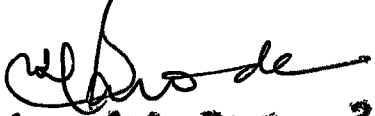
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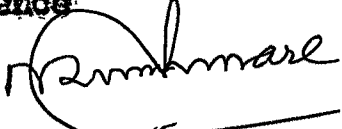

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INTRODUCTION

CHAPTER 1

INTRODUCTION

"When women are neglected, humanity is deprived of half of its energy and creativity". by Late Prime minister Mrs. Indira Gandhi.

According to the census of 1991, India's total population is 84,39,30,861. out of it 67.70 crores population is located in rural areas. The female population in ^{total} is 49 per cent and out of female population, 46 per cent is comprised of female children (below 18 years). A majority of these female children in India are deprived of basic needs due to socio-cultural and economic conditions.

Although the Indian constitution, the five years plans, strategies and programmes of social development have been focussing attention on children and recently on women development, yet the concept of girl child who is victim of the gender bias, is of recent origin. The present neglectful situation of the girl child arises out of lower social status of women and the traditional gender bias. (Chowdhary, 1990).

A girl is expected to take orders and obey. A boy is encouraged to think for himself and make decisions. A girl is expected to cope with problems and crisis, but be guided by a man when it comes to business and financial matters or political wisdom and understanding. (Majumdar, 1990).

The status of girl child is although distinctive but can not be differentiated from the status of mother because both are embedded with same socio-culture socio-religious and historical forces. (Khan, 1990).

The status and position of the mother in the household and the community goes down just because she has given birth to a daughter (Ghosh, 1991).

Even today in millions of homes, the birth of a girl produces a bleak atmosphere while the birth of a boy is an occasion for exuberance of joy (Gangrade, 1986).

The preference for sons and the irrational, religious sentiments that they were vital for performing the last rites had added to the discrimination against the girl child. In India, the dowry system was also responsible for the low status of the girl child. One telugu saying is that, " bringing up a girl is like watering a plant in a neighbour's garden (NIPCCD, 1988).

Born in indifference and reared on neglect the Indian girl child grows up looking upon herself as inferior and subservient. This negative self image shapes her personality and moulds her into the stereotype of submissive and self sacrificing daughter, wife and mother. In India girl child is neglected as she is

considered as economically burden. (Hati, 1992).

Gender discrimination, especially in developing countries, is traced to lack of economic security. Sons are considered to be economically productive members and providers of financial support in old age. However, the belief that a daughter is an economic liability can be countered with the argument that in rural India, where the bulk of the people live, a girl works for 9 hrs a day at an average of 315 days in a year in the field and annual labour which at the minimum wages could cost Rs.2,200 to hire (Saraswathi, et al ,1994).

The threat of becoming "immoral" and "polluted" were the major reasons for not sending the girls outside their village for education, after reaching puberty age (Charyulu and Reddy, 1987).

Despite of constitutional safeguards after independence, the position of girl child continues to be much lower than that of a male child. position of girl further worsened when self-restraint and self-denial were glorified as deserving qualities of a good girl. She is generally known as a temporary guest in her parental home or a bird of passage. (Chowdhary, 1990).

A girl child is neglected from her birth and systematically deprived of physical and emotional care

and love. This deprivation leads to an unequal share in terms of food, clothing, health care, education, family income and property which has a tremendous impact on her physical and mental health and personality development, (Pandey, 1990).

Even after four decades after independence and a decade after a National policy for children, a national plan for the Development of women and decade of girl child (1990-2000 AD) were adopted the girl child who embodies both youth and womenhood is still a barely discernable shadow on the periphery of national policy and public awareness. Born into indifference and reared on neglect, she is caught in a web of submissive secondary entity in the scheme of things in matters of food, health and education (Mendonca, 1989).

Hence it is felt necessary to study the profile of rural girls in low-middle and middle-socio-economic status families in Parbhani district with the following objectives.

1. To collect data on growth of rural girls in Parbhani district to investigate their growth pattern and to compare it with National Centre for Health Statistics (NCHS) data of American girls.

2. To study general meal pattern of rural girls.
3. To find out general health problems and care taken of rural girls.
4. To analyse the activity and time spending patterns of rural girls.
5. To assess the investments made by rural families for educating their daughters and to know parental attitudes towards their daughters in rural area.

**REVIEW
OF
LITERATURE**

CHAPTER 2

REVIEW OF LITERATURE

Resume of the work on the study of profile of rural girls was observed to be very scanty. The available literature pertinent to this study is presented below under broad heads.

2.1 Growth Pattern in Rural Girls.

According to Mahgir (1981), in rural areas the mean for weight in the age years 10, 11 and 12 show significantly higher values for the boys as compared to the girls. During the age period 14-18 years the girls showed significantly higher mean values as compared to the boys. There was a trend for significant increase in weight both for boys and girls with increase in age. The rural girls maintain higher values for mean increments during 12-17 yrs, the difference being statistically significant only at the age of 14 yrs. In rural areas the height values showed progressive significant increase with age in boys and girls upto 18 yrs of age. The observed peak height velocities were 5.8 and 6.1 cm/year during 12-13 yrs in rural boys and girls, respectively. The mean values both for boys and girls were identical from age period 10-13 yrs and also at 15 years age. Thereafter, girls are significantly taller than boys.

Sathyavathi et al (1981) reported that, the rural girls showed higher mean values than their male counterparts in the early part of adolescence. However, after 16 yrs. of age, rural boys showed a significantly higher growth as compared to the rural girls. The comparative study between rural and urban girls reveals that rural girls are significantly ahead of their urban counterparts during 10-21 yrs of age.

The data based on different research have shown that girls in India do not achieve their full height and weight potential on account of dietary insufficiencies. In fact, ICMR data of 1955 and MNMB data of 20 yrs later, both for rural girls, demonstrate that there is "no evidence of secular trends indicating improved growth performance in the succeeding generation- a feature expected of all successful developing societies. (Gopalan and Kaur, 1989).

2.2 Age at Onset of Menarche.

ICMR study conducted in 1972 on growth and physical development of Indian infants and children revealed mean age at menarche for Maharashtrian urban girls was 13.70 years and rural girls 14.63 years.

Study by Agarwal et al (1981) found that the mean age for menarche in upper socio-economic Varanasi girls was found to be 12.75 yrs while the middle socio-economic group Indian girls in different regions had mean menarcheal age of 13.25 (Chitoor), 13.75 (Agra) and 14.58 (Kottayam) yrs. A significant effect of geographical regions and socio-economic groups on the event of menarche was observed.

The mean age at menarche of the girls of Delhi was even less than the reported mean age at menarche of American girls 12.9yrs, but the American girls were 5cm taller than those of Delhi at the 18th year. Apparently, the final adult height that is achieved is not necessarily related to the age at menarche. Obviously it is not just the socio-economic status alone but other factors as well that determine the age at menarche. (Gopalan, 1989).

2.3 Food Intake and Meal Pattern of Rural Girls.

Among Indian families , the largest share of food is usually given to the bread winner next to the boys and last to the girls and women in the household. Indian women are known to eat last and least. Male members have a larger say in the decision for food allocation as is indicated by observation from data collected from Maharashtra (cited in Pandey, 1990).

The child which arrives at adolescence in a stunted state because of early malnutrition has the intake potential to achieve, during its adolescent growth phase an even higher growth velocity than the non-stunted child which had not suffered early malnutrition, but for such higher growth velocities to actually materialise and reach their full peak, additional nutritional inputs over and above what the habitual poor dietries of these children provide, may be necessary such as increased intake of calories, protein, calcium, iron and other nutrients, which are essential to sustain such an enhanced growth velocity over an extended period. In the absence of these additional inputs, the physiological opportunity provided by adolescence to correct growth deficits that had earlier accrued may not be fully availed of and the child would end up as a stunted adult, thus missing the "Second round" even as they had missed the first. (Gopalan, 1989).

Ramana (1990) explains that, illiteracy is the greatest barrier for the improvement of the status of female in our country. The NFHS data reveals that the child nutrition is better in households having literate women.

According to Mittal (1992) data based on household expenditure show a positive discrimination against women in the sharing of foods and other items in the normal household. Available data on the dietary consumption among one to eighteen years show that girls consume much less than boys. This situation has decisive adverse consequence on the health status of young mothers and their offspring, more so when nutritional deprivation, in terms of calorie adequacy, continues throughout pregnancy and lactation.

2.4 Activity Pattern of Rural Girls.

Birra (1989) recorded that burden of household duties falls largely upon female child. In the rural areas girls are engaged in looking after younger siblings, cooking, cleaning, fetching and carrying. This releases adults for more productive and remunerative work. Little girls are seen carrying small pots on their heads, following their mother or elder sisters to the well. Water carrying which is little more than play to being with nevertheless makes a useful contribution to household work. Older girls go with their parents to the field to help them in work such as sowing, transplanting, weeding and harvesting, collecting fuel and scaring away birds at fields.

Ramana (1990) emphasized that usually it is believed that a woman spends less energy than a man. A survey in rural areas however, showed a reverse trend. The labour contributions of men, Women and children were found to be 31% , 53% and 16% respectively if activities like household chores, rearing of children, fetching water, collecting firewood and carrying meals to fields for the men folk were also taken in to account. In India a wage premium for male over female labour exists and this causes parents to rationally favour boys over girls to enhance the family resources.

The study of Sabramaniam (1991) concluded that most of the girls were doing domestic work. A combination of domestic and wage work was also found to be high. There was clear correlation between the age of girl child and her work pattern. There is a shift from predominately domestic work to wage work between five to fifteen years of age. The number^{of} hours the girl child works also increases progressively with age. Siblings appear to have a major role to play in the work pattern of the girl child. Birth order shows that where there are younger siblings who require care, or when the male children are doing wage work, the girl child spends more time on domestic work. Larger the family the greater the chances of doing wage work.

Anandlakshmi (1991) studied that around the age of six the girl child finds that she has to take part in a large number of tasks in the household. Some of them would be related to earning a livelihood and other to sustain and maintain the household that is economically marginal, when at that age other children start formal education.

The study of Mandal (1991) conducted in Bihar reveals that as compared to males work participation rate for girls in 0-14 yrs has been increasing over the last few years. It increased from 2.63% in 1974 to 2.95% in 1984 while for males for the same age group, it declined from 6.65% in 1974 to 5.48% in 1984. In 15-19 year age group the rate increased by 17% for females and declined by 8% for males. It is well known that women's work is invisible. The girl child is engaged in household chores as soon as she is 5-6 yrs of age. She may be engaged in looking after younger siblings or in cleaning the house or helping the mother in household activities.

2.5 School Enrollment and Education of Rural Girls

According to Shah and Nigla (1983) Majority of rural women had favourable attitudes towards the primary education of their daughters and had favourable attitudes

with regard to the three aspects of the primary education namely 'Value' 'Expenditure' and 'Facilities'.

Chatterjee (1987) reported that although female enrollment is increasing the gap between females and males is perhaps widening. This may be largely due to socioeconomic factors related to the need for girls to work both in and out of house versus the low return perceived to their education. Also related to the continuing practice of early marriage of girls. And not the least it is due to the poor availability of facilities for girls in the schools.

Khaskaran (1989) reported that for girls the beginning and the end of education is connected with domestic tasks entrusted to them by the family and the lack of interest shown by parents in their daughter's education in contrast with that shown in the educational progress of boys.

Chowdhary (1990) emphasised despite the fact that in the Indian culture, education (Vidya) is symbolized by goddess Saraswati, yet girls education does not get much attention because of the traditional bias against girls going to school, this is due to early marriage, the older girls looking after their younger siblings, girls looking after household, cattle, grazing, fetching, irrelevance of girls education, absence of female teachers etc.

As per Mandal (1991), in Bihar wide range of differences in male and female literacy rates was a reflection of the low level of enrolment of girls in schools as compared to that for boys. Perhaps higher failure rate in examination is evident in reaching universal retention or in ensuring that a child who is enrolled in school is retained there in till he completes the class 8th or the age of 14.

2.6 Attitudes of Rural People Towards Girls.

According to Anandlekhmy and Bajaj (1981), the sex of the child determines to a larger extent the kind of experiences the child would face in the future. Restrictions are imposed on the behaviour, movement and dress of girls as early as four year of age. Young unmarried girls, by and large, lead a life of domesticity unhampered by school routines or tasks.

Significant negative relationship was found between the total number of children and the attitudes of rural mother. More number of respondents having less number of children had a favourable attitude as compared to the respondents having more number of children. (Shah & Nagia, 1983).

Das Gupta (1987) reported the reason for discriminating against females do not lie primarily in economic

hardship for India as a whole, the evidence suggests that son preference is primarily culturally determined and scarcity of resources may almost accentuate the effects of sex bias within a given culture. Indian society in general is patriarchal, such that parents benefit more from having sons than daughters.

MATERIALS AND METHODS

CHAPTER 3

MATERIALS AND METHODS

The present study was planned to investigate the profile for rural girls in Parbhani district. Materials and methods used in this investigation are presented under the following heads.

- 3.1 Locale of the study
- 3.2 Selection of the sample
- 3.3 Developing interview schedule
- 3.4 Selection of tools and techniques
- 3.5 Methods of data collection
- 3.6 Research Design and technique
- 3.7 Statistical analysis

3.1 Locale of the study

The study was conducted in ten randomly selected villages- Nandgaon, Asola, Aarai, Hatta, Shinde Takli, Male talkli, Chudava, Erandakwar, Khali, Dharkhed each two villages from randomly chosen five talukas namely Parbhani, Basmath, Selu, Purna and Gangakhed located in Parbhani District of Marathwada region. Nearby location, similar socio-economic and cultural conditions, and easy to approach by state transport were the criteria for selection of these villages.

3.2 Selection of Sample

A stratified random sample of 200 families having a girl child in the age group of 7-15 yrs was selected from randomly chosen ten villages. The sample girls were chosen at random from low-middle SES & middle SES groups to study the impact of SES on the status of rural girls. Low-middle SES and middle SES groups were only chosen due to the inavailability of the sizable sample girls of the same age range in other SES categories in the selected villages. The details are shown below.

Socio-economic status categories		
Age (years)	Low-middle SES	Middle SES
7-9	35	35
10-12	35	35
13-15	30	30
Total	100	100

3.3 Developing Interview Schedule

A structured interview schedule was formulated to elicit the general and specific information pertinent to the investigation. The interview schedule mainly focussed on health and nutrition, menarche, education work pattern of rural girls and parental attitudes towards them. Prior to finalization, the schedule was pretested for its clarity, validity and adequacy on twenty rural girls exclusive of the final sample. Necessary modifications were made to overcome the ambiguity and difficulties experienced in the data collection to finalise the schedule. (Annexure I)

3.4 Selection of Tools and Techniques

3.4.1 Socio-economic status scale

The selected sample was classified into various categories of socio-economic status based on socio-economic status scale (Rural) developed by Pareek and Trivedi (1964). The scale is based upon the information about the rural family like caste, occupation, education, social participation, land, house, farm power, material possessions and type of family. The socio-economic status of a family was determined by applying the following classificatory scale to the total obtained score.

	Category of Class	Total Score
1.	Upper class	Above 43
2.	Upper-middle class	33-42
3.	Middle-class	24-32
4.	Lower-middle class	13-23
5.	Lower class	Below 13

3.4.2 Age

Rural girls age was calculated to the nearest month and year of interview day on the basis of information reported by the subject where ages were generally known and also by cross-checking from date of birth certificates. In the absense of the above, it was

calculated by questioning the sample mothers to recall the month and year in which her daughter was born as the method which was generally practiced.

3.4.3 Anthropometric measurement techniques

Height : The subject was asked to remove her footwear. She was made to stand straight with her heels, buttocks and shoulders touching smooth surface of wall and with feet parallel, and placed together, with the arms hanging at the sides in a natural manner. The subject was requested to look straight at her eye level. A plastic scale was kept on her head pressing the hair and making contact with top of the head. With a pencil later marking was done on the wall and height was measured with the help of non-stretchable metal tape having 0.5 cm sensitivity.

Weight : Weighing machine was kept on flat surface and adjusted to zero. The subject was asked to remove footwear and heavy garments (woollens) if any and then was made to stand straight on the centre of machine platform without any support. The reading was noted down from portable weighing machine having a range of 0.1 to 125 kg and 50 gm sensitivity.

3.4.4 Age of onset of menarche

The girls were asked to recall the month and year of onset of menarche for assessing the age for the same.

3.4.5 An international reference growth standard

It had been argued that on the basis of available world-wide data, dietary and environmental constraints and not genetic factors, are the predominant determinants of difference as between the growth performance of children of the developing and developed countries. An expert working group of WHO constituted in late 1973 to advise on the use of anthropometric indicators of nutritional status in surveys and for nutritional surveillance, had recommended on the data world-wide, that the data assembled by the National Centre for Health Statistics (NCHS) of the U.S.A. were best (Cited in Lancet and NFI project) situated for use as an international reference. Hence, in this study NCHS data is used for comparison.

3.4.6 Training of investigator

Prior to the research work the investigator was adequately trained by the local paediatrician for taking anthropometric measurements of girls in order to avoid errors. Further through few trials the ability of the investigator in adoption of correct techniques

for taking anthropometric measurements was ensured.

3.4.7. Recording activity and time-spending patterns of rural girls.

The sample girls were requested to recall and state all the activities generally performed by them from dawn to dusk and the amount of time approximately spent on such activities. Later the stated activities were analysed and clubbed under broad heads and the amount of time (mean \pm SD) spent on those activities was calculated. The reliability and validity of this information was checked by the investigator through naturalistic observation.

3.4.8 Naturalistic observation

Besides interview, naturalistic observations of twenty per cent of the selected girls (40) was done from dawn to dusk (6.30 am to 6.30 p.m.) to find out reliability of the information obtained from girls through personal interview and to gain more insight about rural girls. ^{in off season (Jan.-March)} Time block of three to four hours was made with fifteen minutes interval for observation. The observed items and time spent as denoted on the prepared checklist. (Annexure II). All the necessary precaution were taken so that the respondents were not conscious of being observed by the investigator.

3.5 Methods of data collection

The data was collected from the selected girls and their parents by implementing survey through personal interview method by the investigator by paying 1-3 visits to them. Approximate time taken for conducting complete survey was 70-100 minutes. on the basis of finalized structured interview schedules by naturalistic observation and by following standard procedures for taking anthropometric measurements in their homes.

3.6 Research Design and Techniques

The variable tested in this study included independent variables such as

1. Chronological age of girls
2. Socioeconomic status of respondents families.

Dependent variable are

1. Growth of girls (height, weight)
2. Health care of girls
3. Food intake
4. Activity and time spending pattern
5. Investments made on educating girls
6. Parental attitudes toward their daughters.

3.7 Plan of Analysis

Correlation and regression analysis was carried out as per the standard procedure given by Snedecor and Cochran (1956) to test the relationship between age (independent variable) and different other variables such as height and weight.

Students 't' test and 'z' test were used to compare the data of middle and low-middle SES groups on health, food intake, educational investments, parental attitudes.

Actual weight, height and weight/height percentages were explained as the ratio to standard weight, height, and weight/ height.

$$\frac{\text{Actual measurement}}{\text{Standard measurement}} \times 100$$

Standard measurement : From NCHS growth curves published in American Journal of clinical nutrition (1979).

To test the reliability of data reported by the respondent, correlation coefficient were estimated between reported date of time and observed date of time.

The percentage of agreement on the reliability of reported activities was calculated by using the formula (Saraswathi and Dutta, 1988) given below.

$$\text{Agreement} = \frac{(U - D_a)}{(U + \frac{1}{2} \times X)} \times 100$$

- U = Total number of instances agreed.
(recorded activities)
- D_a = Total number of disagreement.
(not recorded) in coding
- X = Total number of clauses (activities)
coded by one person and not by
another.

The sign test was applied to find out the trend of growth of rural girls in low-middle and middle SES group. The null hypothesis tested under this was
 $H_0 : P (x_A > x_B) = P (x_B > x_A)$ the probability of the test under H_0 was estimated as per given formula. The null hypothesis was rejected if
 $P (x_A > x_B) < 0.05$

$$P(x) = \sum_{x=0}^N \binom{N}{x} p^x q^{n-x}$$

Where N = Total number of observation
 x = Number of positives out of N

Comparison of the time spending patterns of the selected age group rural girls was made between low-middle SES and middle SES groups by using the formula given below.

$$\left\{ \frac{\text{Mean 1}}{\text{Mean 2}} - 1 \right\} \times 100$$

Where mean 1 was of selected age groups girls of low middle SES and

Mean 2 was of selected age groups girls of middle SES

RESULTS AND DISCUSSION

CHAPTER 4**RESULTS AND DISCUSSION**

The study entitled " The Profile of Rural Girls of Parbhani District " was carried out in randomly selected ten villages belonging to five talukas of Parbhani district of Marathwada region. The investigation was undertaken with specific objectives in order to study the profile of rural girls.

The obtained data were pooled, analysed, tabulated and discussed under the heads given below.

- 4.1 Background Information
- 4.2 Growth of Rural Girls
- 4.3 Food Intake and Meal Pattern
- 4.4 Health care
- 4.5 Activity Patterns
- 4.6 Investments and Efforts made in Educating Rural Girls
- 4.7 Parental Attitudes Towards Their Daughters
- 4.8 General Information of Rural Girls and Their Parents.

Table 1 General information of parents of the sample Girls.

Particulars	Socio-economic status of families			
A) Age (years)	Low-Middle SES (100)		Middle SES (100)	
	Mother	Father	Mother	Father
20-30	4	-	22	1
30-40	75	63	69	74
40-50	21	37	9	22
50	-	-	-	3
B) Education				
Illiterate	84	29	77	5
Primary	15	53	21	42
Middle	1	15	1	25
High-school	-	3	1	26
Graduation	-	-	-	2
C) Occupation				
Agril. Labourer	5	9	-	-
Caste Occupation	-	8	-	-
Business	-	9	-	-
Cultivation	-	69	1	88
Service	-	5	-	12
Housewife	95	-	99	-
		Low-Middle SES		Middle SES
D) Type of family				
Nuclear		74		74
Extended		6		6
Joint		20		20
E) Income per annum				
Below Rs. 20,000		4	Rs. 35,000-40,000	11
Rs. 20,000-25,000		21	Rs. 40,000-45,000	31
Rs. 25,000-30,000		35	Rs. 45,000-50,000	43
Rs. 30,000-35,000		40	Above Rs. 50,000	15

Table 1 deals about the general information of parents of rural girls. It is evident from the Serial 'A' of the Table that majority of the rural girls parents in both the SES groups belonged to the age range 30-40 years followed by 40-50 years and 20-30 years. Serial 'B' of the Table 1 revealed that majority of the mothers were illiterates and 42-53 per cent fathers had primary school education in both SES groups. From the data of the Table 1 at serial 'C', it can be concluded that majority of the mothers were housewives while majority of fathers had cultivation as their primary occupation. Regarding type of family, Serial 'D' of Table 1 indicated that 74 per cent parents had nuclear type families and 20 per cent had joint families in both SES groups. Serial 'E' of Table 1 denoted that in low middle SES group 40 per cent of the parents had annual income of Rs. 30,000-35,000 followed by the income range of Rs. 25,000-30,000 (35%) and below Rs. 20,000 (4%). On the other hand in middle SES group 43 per cent parents had the annual income ranging Rs. 45,000-50,000 followed by the income range of Rs. 40,000-45,000 (31%), above Rs. 50,000 (15%) and Rs. 30,000-40,000 (11%).

4.1.1 Distribution of rural girls according to age and SES

Table 2 Distribution of Selected rural girls according to age and socio-economic status

Socio-economic status of girls			
Low-Middle SES (100)		Middle SES (100)	
Mean age (years)	Number (100)	Mean age (years)	Number (100)
7.4	14	7.4	14
8.4	14	8.5	9
9.6	13	9.4	16
10.6	13	10.4	10
11.6	12	11.6	10
12.6	9	12.4	14
13.4	14	13.5	7
14.5	5	14.4	12
15.2	6	15.3	8

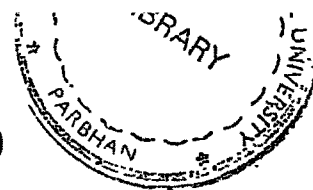
Table 2 illustrates the distribution of selected rural girls based on their age and socio-economic status. In low-middle SES groups the girls lowest mean age was 7.4 yrs and the highest mean age was 15.2 yrs and at each enlisted mean ages the number of girls ranged from 5-14. In middle SES group 7.4 years and 15.3 years were the lowest and highest mean ages of girls respectively. The distribution range of girls was 7-15 for each studied mean age. Out of 200 rural girls¹⁰⁰ belonged to low-middle SES and rest belonged to middle SES groups.

4.1.2 Age at Menarche

Table 3 Mean age at menarche of rural girls.

SES groups	Mean age (years)
Low-middle	13.63 \pm 0.44
Middle	13.18 \pm 0.49

The mean age at menarche of rural girls is cited in Table 3. In low-middle SES group girls reached menarche at the age 13.63 \pm 0.44 while it was 13.18 \pm 0.49 for middle SES group. The mean age at menarche of the rural girls of the present study is lesser than the reported mean age 14.6 years for Maharashtra rural girls by ICM (1972) and more than the



reported age of Bombay (12.4 years) affluent girls by NFI (1989).

4.2 Growth in Rural Girls

Measurement of height (Stature) and weight provide important clues whether the individual is growing properly for age, about health and nutritional well-being. Body measurements plotted on growth charts indicate whether individual's growth is abnormal or normal or subnormal. (Annexure III.)

4.2.1 Comparison of Mean Heights of Rural Girls.

The mean height of low-middle and middle socio-economic status rural girls according to their age are presented in table 4. These differences in middle SES girls at 8+ might be due to their ill health and under nourishment after age 7+ which might not have contributed to more increment in their height; and at age 15+ it might be due to relatively early onset of menarche in middle SES group (13.18 ± 0.49) girls as compared to low-middle SES group, due to which girls gained greater increment in height (growth spurt) in the year preceeding the menarche, which later gradually slowed down. However, the sign test revealed no

significant difference between the overall mean heights of low-middle and middle SES groups rural girls.

It is obvious from the measurements that there was a sudden increase in height (Peak) of girls between 11+ and 12+ years in low-middle SES group and between 9+ and 10+ years in middle SES group due to the beginning of puberty growth spurt.

In middle SES group mean heights of girls found to be slightly better than the low-middle SES group till the age 14+. However, at the age 8+ and 15+ these girls found to be inferior to the girls of low-middle SES group.

Table 4 Comparison of mean heights (cm) of rural girls,

Age (years)	Mean height (cm) of girls	
	Low-middle SES (100)	Middle SES (100)
7+	109.93 \pm 6.70	114.50 \pm 6.50
8+	117.79 \pm 6.75	119.33 \pm 7.53
9+	122.62 \pm 4.21	123.44 \pm 1.05
10+	123.62 \pm 6.05	132.10 \pm 7.92
11+	125.08 \pm 6.57	136.20 \pm 6.33
12+	136.67 \pm 9.20	140.29 \pm 3.09
13+	140.73 \pm 6.60	142.43 \pm 8.90
14+	146.40 \pm 3.47	151.83 \pm 4.76
15+	156.23 \pm 3.94	154.50 \pm 4.00

Sign test under H_0 is $P=0.09$. Cal. Prob. is greater than $P < 0.05$. Hence the differences are non-significant.

The mean heights of the (Present study) rural girls have been compared with growth chart of American girls (NCHS) at 50 percentile of corresponding ages (fig.1). Figure 1 clearly indicates that in respect to stature the rural girls in both the SES groups ^{were} found to be significantly shorter than the NCHS girls.

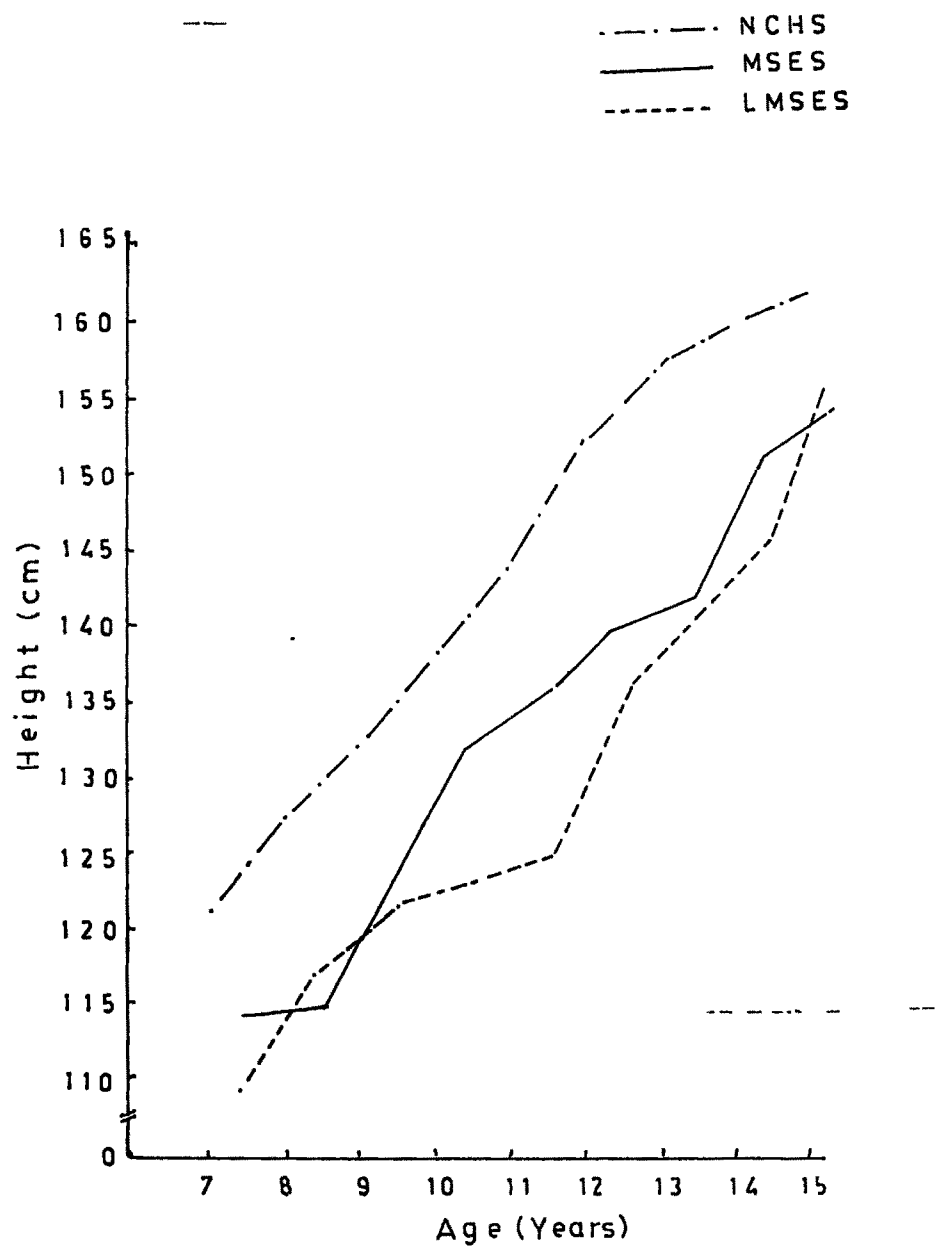


Fig 1 COMPARISON OF MEAN HEIGHTS OF RURAL GIRLS,
(PRESENT STUDY) WITH NCHS DATA

Correlation and regression analysis for height/age was estimated by linear regression. Co-efficient of correlation is positive and significant. Out of the total variations, 98% , 95% and 97.6% variations in height, in NCHS data ($r=0.99^{**}$) low-middle SES, ($r=0.97^{**}$) and middle SES ($r=0.97^{**}$) respectively are explained by age of girls. This reveals^{ed} that with increase in age, height of girls increases. In respect to increment in height (cm)/year it was observed that with one year increase in age among girls height increased by 5.45 cm in (NCHS) American girls [$y=8.3717_0 + 01+5.4500_0 + 00(x)$] . by 5.43 cm in low-middle SES girls [$y=8.8649_0 + 01+ 5.4256_0 + 00(x)$] , and by 5.29 cm in middle SES girls [$y=7.7380_0 + 01+5.2930_0 + 00(x)$] . There was no significant difference among NCHS girls and the rural girls of present study as regards to rate of increment in height.

Table 5. Distribution of rural girls into various categories of growth based on their stature.

Percentage of standard height	Growth categories	Percentage of girls	
		low-middle SES (100)	Middle SES (100)
Above 100	Abnormal	-	04
90-100	Normal	49	64
Below 90	Subnormal	51	32

Effort was made to express height of the rural girls of both the SES groups as a percentage of the standard height NCHS data in order to find out percentage girls falling into various categories of growth; abnormal, normal and subnormal.

Significantly more number of girls in middle SES group had normal stature. On the otherhand significantly more number of girls in low-middle SES group belonged to subnormal category of growth for having got height below 90% of the standard height. These results on the height of rural girls are similar to the findings of Gopalan and Kaur (1968).

4.2.2 Comparison of Mean Weights of Rural Girls.

Table 6 Comparison of mean weights (kg) of rural girls

Age (years)	Mean weights (Kg) of rural girls	
	Low-middle SES (100)	Middle SES (100)
7+	17.42 \pm 1.46	16.17 \pm 3.38
8+	19.14 \pm 1.32	18.83 \pm 1.78
9+	21.38 \pm 3.22	23.31 \pm 5.21
10+	22.23 \pm 1.91	25.60 \pm 3.92
11+	21.66 \pm 2.05	26.30 \pm 3.45
12+	29.61 \pm 7.40	28.75 \pm 4.50
13+	34.12 \pm 4.39	34.21 \pm 8.15
14+	35.90 \pm 4.74	39.33 \pm 2.55
15+	42.75 \pm 3.77	40.75 \pm 1.53

Sign test under H_0 is $p=0.253$ Calc. Prob. is greater than $p > 0.05$. Hence differences are non-significant.

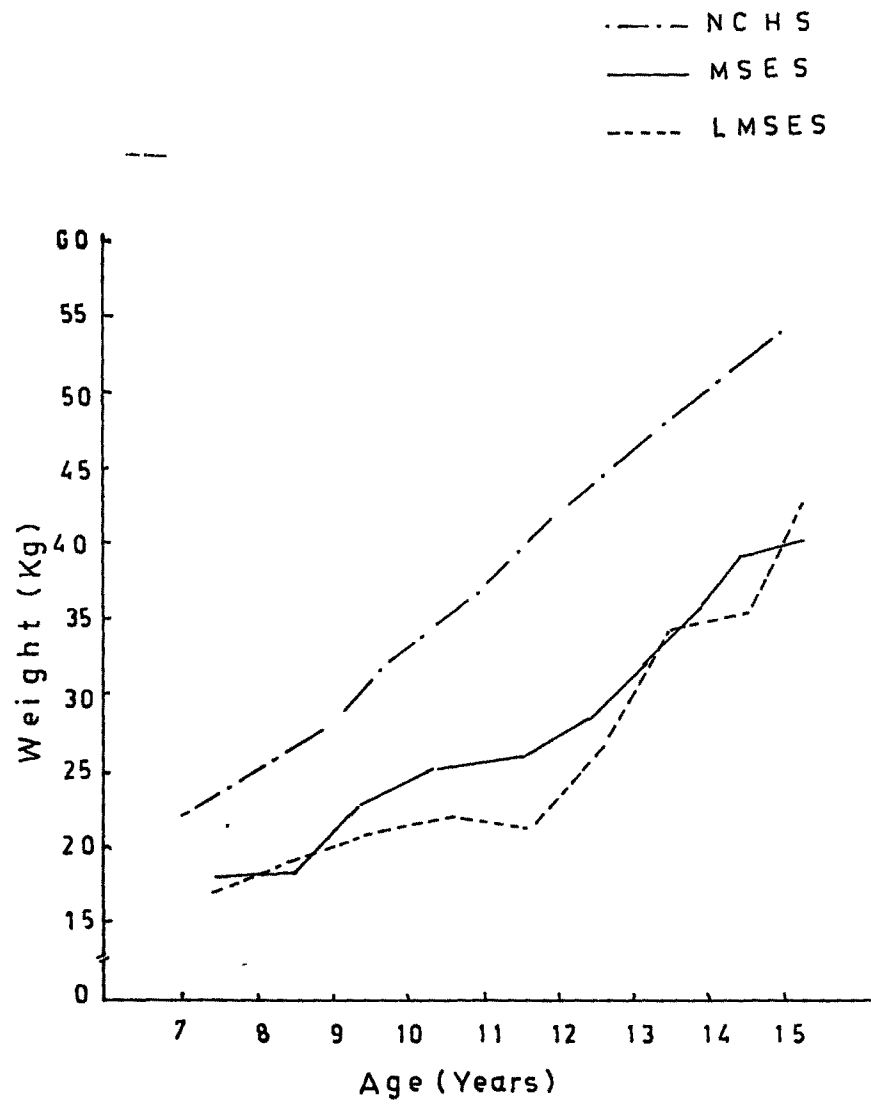


Fig.2 COMPARISON OF MEAN WEIGHTS OF RURAL GIRLS
(PRESENT STUDY) WITH NCHS DATA

Table 6 illustrated that the mean weights of low-middle SES and middle SES rural girls according to their age. The results indicated that middle SES girls were relatively heavier than their counterparts at the ages 7+, 8+, 9+, 10+, 11+, 13+, 14+, while it was vice-versa at 15+ age. This might be due to relatively early onset of menarche (13.18 ± 0.49) in middle SES group girls as compared to low-middle SES (13.63 ± 0.44) who generally experience greater weight gain one year just before (12 years) and just after (14 years) of menarche, and then gradually reduces. This also indicated that weight gain has significant positive association with age at menarche.

However, the sign test revealed no significant difference between the mean weights of low-middle and middle SES rural girls. The Mean weights of the sample girls have been compared with (NCHS) data of American girls at (50 percentile) of corresponding ages (fig.2). The curves in fig 2 indicate that the girls in both the SES groups found to be significantly lower than the NCHS data on similar age girls in their weight.

Correlation and regression analysis for weight/age was estimated by linear regression. Co-efficient of correlation was positive and significant. Out of the total variations 99 per cent, 98 per cent and 95.8 per cent variations in girls weight in NCHS data ($r = 0.99^{**}$) low-middle

SES ($r=0.94^{**}$) and middle SES ($r=0.98^{**}$) respectively were explained by their age. This illustrates that with increase in age there was increase in weight of girls. In respect to increment in weight/year, it was recorded that with one year increase in age, weight increased by 4.13 kg in (NCHS) American girls [$y = -8.0222_0 + 00 + 4.1333_0 + 00 (x)$] ; by 3.53 kg in low-middle SES group [$y = -8.2497_0 + 00 + 3.0315_0 + 00 (x)$] and by 2.97 kg in middle SES group, [$y = -5.7029_0 + 00 + 2.9590_0 + 00(x)$]. There was no difference between the weight increments of low-middle and middle SES groups. However, the increment in weight of American girls at (50 percentile) was significantly more than the present study rural girls.

Attempt was made to express the weight of the rural girls of both the SES groups as a percentage of the standard weight-NCHS data, in order to findout percentage of girls falling into the categories of growth-abnormal, normal and subnormal.

Table 7 Distribution of rural girls into various categories of growth based on their weight-

Percentage of weight	Growth categories	Percentage of girls	
		Low-middle SES (100)	Middle SES (100)
Above 100	Abnormal	-	4
90-100	Normal	-	8
Below 90	Subnormal	100	88

Table 7 implies that majority of the middle SES girls and all the low-middle SES girls belonged to subnormal category of growth with regard to weight as they had below 90 per cent of the standard weight and only 8 per cent and 4 per cent girls in middle SES had normal (90-100) and above normal (above 100) weights respectively as compared to NCMS girls. Similar findings were reported by Gopalan and Kaur (1989).

4.2.3 Comparison of Weight/Height of Rural Girls
The weight/height ratio of rural girls of both SES groups are expressed as percentage of the standard ratio of weight/height = NCMS data to categorise the girls as having abnormal, normal and subnormal growth. (Annexure IV)

Table 8 Distribution of the sample girls into various categories of growth based on their weight/height

Percentage of weight/height ratio	Growth categories	Percentage of girls	
		Low-middle SES (100)	Middle SES (100)
Above 100	Abnormal	4	4
90-100	Normal	6	11
Below 90	Subnormal	94	85

Results in Table 8 reveal that majority of the rural girls in both SES groups had subnormal growth when assessed based on their weight/height ratio, as they were below 90 percent of standard weight/height. The reason for this could be absence of additional inputs over and above their habitual poor dietary pattern in age group 7-15 years, which subsequently make/made them to miss the physiological opportunity provided by adolescence to correct growth deficits (i.e. Second round), if continued which further may lead to "stunted growth" in these rural girls.

It is concluded that there is significant difference between the growth of NCHS girls and the present study rural girls of both the SES groups. Among the middle and low-middle SES groups, there was no difference in the increments in weight and height of rural girls. Middle SES rural girls were significantly better than their counterparts in low-middle SES, with regard to percentage of standard height (NCHS). However, with regard to weight/age and weight/height they were almost similar.

4.3 Food Intake and Meal pattern

4.3.1. General meal pattern and timing of rural girls

One's nutritional status depends upon the quality and quantity of food one consumes. A balanced diet is important for growth of body and maintenance of health throughout the life of an individual.

Table 9 General meal pattern and timings of the rural girls

Timings	Food Items	Per cent of girls		Z ² Value
		low-middle SES (100)	middle SES (100)	
7-8 a.m.	Breakfast			
	Tea	87	82	1.25 ^{Ns}
	Milk	13	18	1.25 ^{Ns}
	Roti and Chutney	6	6	-
	Rice	5	4	-
	Bread/Biscuit	9	11	-
10 a.m.	Lunch			
12 noon	Jawar Roti	17	11	1.50 ^{Ns}
	Chapati	83	89	1.50 ^{Ns}
	Rice	30	35	-
	Dhal	82	81	-
	Vegetable Curry	73	78	1.00 ^{Ns}
	Chutney/ <u>Thecha</u> / Pickle	82	63	3.80 ^{**}
	Curd	7	8	0.33 ^{Ns}
	Milk	9	16	1.75 ^{Ns}
	Dhapate	21	28	1.40 ^{Ns}
5-5.30 p.m.	Snacks			
	Tea	15	19	0.80 ^{Ns}
	Poha	3	7	-
	Chivda	7	2	-
	Upma	2	4	-
8-9 p.m.	Dinner			
	Jowar Roti	88	91	0.75 ^{Ns}
	Chapati	11	9	0.50 ^{Ns}
	Rice	22	27	1.00 ^{Ns}
	Dhal	7	10	1.00 ^{Ns}
	Vegetable curry	10	17	1.75 ^{Ns}
	Milk	20	28	1.60 ^{Ns}
	Curd	3	8	-
	<u>Thecha</u> / Pickle	58	40	0.83 ^{Ns}
	Khichadi	62	71	1.50 ^{Ns}
	Thalipith	58	63	0.83 ^{Ns}
	Pithala	19	20	0.20 ^{Ns}

** = $P < 0.01$, Ns = non significant.

The general meal pattern of the sample rural girls is given in table 9. It is obvious from the table that majority of the girls in low-middle and middle SES groups had food, two times- afternoon and night per a day. Daily at morning around 7 to 8 a.m. majority of the girls in both the groups had a cup of tea. Majority of the girls in both the groups had lunch at about 10.00 a.m. to 12.00 noon. Lunch generally comprised of 2-3 chapati, $\frac{1}{2}$ to 1 katori dhal, $\frac{1}{2}$ to 1 katori vegetable curry, 1-2 katori rice and 1-2 teaspoon chutney/thecha/pickle. Dinner was generally taken by girls around 8.00 - 9.00 p.m., the meal pattern at dinner was generally 1-2 jowar roties, with 1-2 katori dhal / curry / 2-3 teaspoon chutney/ pithai or 2-3 katori khichadi with thecha/pickle. About 15-19 percent girls in both the SES groups had tea at about 5.00-5.30 p.m. There was no difference in the meal pattern and timings of rural girls between both the SES groups except in consumption of chutney/thecha/pickle.

4.3.2 Generally Consumed Food Groups by Rural Girls

It is evident from the table that, the commonly consumed food groups of all the rural girls in both the SES groups were cereals, pulses, green leafy and other vegetables, milk and milk products, fats and oils, fruits and miscellaneous. The table also reveals that all the studied rural girls were vegetarian.

Table 10 Generally consumed food groups of the selected rural girls.

Food groups and items	Per cent of girls low-middle SES (100)	Per cent of girls middle SES (100)	'Z' value
Cereals			
Rice	30	35	-
Jowar	75	85	2.50**
Wheat	85	92	1.75 ^{Na}
Pulses			
Redgram	55	64	1.50 ^{Na}
Greengram	60	72	2.00 **
Bengalgram	58	60	0.33 ^{Na}
Green leafy Vegetables			
Spinach	35	71	6.00 **
Ferngreek leaves	50	61	1.83 ^{Na}
Ambet Chaka	50	50	-
Safflower leaves	62	63	0.16 ^{Na}
Bengalgram leaves	70	75	0.83 ^{Na}
Tardulim	60	65	0.83 ^{Na}
Other vegetables			
Potato	58	50	1.33 ^{Na}
Brinjal	52	65	2.16 *
Tomato	60	65	0.83 ^{Na}
Ladies finger	50	60	1.66 ^{Na}
Raddish	25	35	2.00 *
Cabbage	28	26	0.40 ^{Na}
Cauliflower	34	60	4.33 **
Pumpkin/bottle gourd	55	65	1.66 ^{Na}
Milk and Milk Products			
Milk	85	100	1.75 ^{Na}
Gurd	10	15	1.25 ^{Na}
Butter milk	22	28	1.20 ^{Na}
Fats and Oils			
Safflower/groundnut oil	100	100	-
Fruits			
Gurva	80	80	-
Banana	58	66	1.33 ^{Na}
Ber	100	100	-
Grapes	25	35	2.00 *
Sapota	28	32	0.66 ^{Na}
Sweet lime	12	20	1.60 ^{Na}
Lemon	25	30	1.00 ^{Na}
Miscellaneous foods			
Sugar	100	100	-
Jaggery	38	45	1.66 ^{Na}
Sugarcane	45	55	1.66 ^{Na}

* - $P < 0.05$, ** - $P < 0.01$, ^{Na} - non-significant.

Information on generally consumed food groups of the selected rural girls are illustrated in Table 10. Majority of the girls in both SES groups consumed cereals such as wheat, Jowar, from pulses, greengram, redgram and black gram, among greenleafy vegetables bengalgram and safflower leaves, and tandulsa followed by fenugreek leaves, ambat chucks and spinach. Tomato, followed by brinjal, ladies finger, potato were the other vegetables mainly consumed by both the groups girls. Consumption of milk as it is observed in 13-18 per cent rural girls and in tea form by above 80 per cent girls was recorded for both the SES groups. Safflower/groundnut oil, and sugar were consumed by all the rural girls. In both the groups, Ber, Gueva and Banana were seasonal fruits commonly consumed by the girls.

4.3.3 Privilege of Getting Required amount and liked Food Items

Table 11 Privilege of the rural girls in getting required amount and liked food items

Reasons	Per cent of girls		Z ² Value
	Low-middle SES (100)	Middle SES (100)	
For yes	(n-59)	(n-73)	2.33*
Special consideration of parents	18	21	0.50 ^{Ns}
Availability of sufficient food	41	52	1.37 ^{Ns}
For No	(n-41)	(n-27)	2.33*
More siblings	21	13	0.88 ^{Ns}
Being elder siblings	9	7	0.40 ^{Ns}
Discrimination being girl	11	7	0.66 ^{Ns}

* = P < 0.05 Ns = Non-Significant

Table 11 indicates privileges of the rural girls in getting required amount and liked food items. Significantly more number of middle SES girls found to get required amount of food and liked food items as compared to their counterparts in low-middle SES group. The reasons given special consideration of parents (18 % and 21 %) and availability of sufficient amount of food at home (44% and 52%) in low-middle and middle SES groups respectively. Significantly more number of girls (41%) were deprived of sufficient amount of food and liked food items such as sweet dishes (Basundi, Kheer etc.) in low-middle SES group as compared to middle SES group. The reasons stated in both the SES groups for the same were more

number of children (siblings) in the family (13 to 24 %) followed by discrimination being a girl (7 - 14 %) and being elder sibling was required to sacrifice (7 - 9 %).

However, there was no difference in the reasons stated for the same in both the SES groups.

4.3.4 Assessment of nutritional status of Rural Girls.

Table 12 Assessment of nutritional status of rural girls based on their weight for age.

Percentage of weight	Classification of nutritional status	Per cent of rural girls		z value
		Low-middle SES (100)	Middle SES (100)	
Above 90	Well nourished	-	12	-
75-89	First degree of malnutrition	41	33	0.16 Ns
61-74	Second degree of malnutrition	35	38	0.50 Ns
Below 60	Third degree of malnutrition	24	17	1.75 Ns

Ns - nonsignificant

After having got data on meal pattern of rural girls it was felt necessary to study the nutritional status of rural girls based on their body weight/age to assess whether the food inputs to the selected girls were sufficient or insufficient. For this purpose

the rural girls were classified into various groups of malnutrition as per the classificatory scale of Gomez (1987).

Table 12 implied that only 12 girls in middle SES and one of the girls in low-middle SES groups were well-nourished. Forty one per cent, 35 per cent, 24 per cent girls in low-middle SES had first, second and third degree of malnutrition respectively, and the corresponding values were 33 per cent, 38 per cent and 17 per cent for middle SES group girls. 'Z' values indicated that there was no significant difference with respect to degree of malnutrition in both SES group. These results are in par with findings of Gopalan (1989).

It can be concluded from the results of above tables that majority of the selected rural girls were not provided with balanced and sufficient amount of food, to exploit the "Second opportunity" which nature offers to the children to overcome deficits in growth.

Majority of the selected rural girls were vegetarian, had generally food twice in a day besides having only a cup of tea in the morning, used some of the items of all food groups except egg, meat and meat products.

4.4 Health Problems and Care Taken of Rural girls

4.4.1 Health problems of Rural Girls

The health problems encountered among the rural girls are reported in Table 13. The results in the table explain that cough and cold found to be commonly and frequently faced health problems of majority of the rural girls in the age group 7-15 years in both the SES groups which was followed by fever. In low-middle SES group girls suffered from vomiting (21%), diarrhoea (24%) and headache (25%) and the corresponding percentages for these health problems in middle SES group were 18 per cent, 21½ per cent and 17 per cent. In low-middle SES group 32-45 per cent girls suffered rarely from vomiting, diarrhoea and headache, while it was 23-41 per cent in middle SES group. Among the enlisted health problems, headache was experienced significantly by more number of girls in low-middle SES group than middle SES group. It was also recorded that 32-37 per cent girls in both SES groups had cuts/injuries and burns on their limbs due to their involvement in housework, farm work and animal care besides in play with peers.

Table 13 Health problems encountered among the selected rural girls

Health problems	Per cent of rural girls				Z ¹ Value	Z ² Value
	Low-middle SES (100)	Frequently Middle SES (100)	Low-middle SES (100)	Rarely Middle SES (100)		
Cough and Cold	70	73	5	5	0.83 ^{NS}	-
Fever	65	55	20	13	1.66 ^{NS}	1.73 ^{NS}
Diarrhoea	24	21	34	41	0.60 ^{NS}	1.16 ^{NS}
Vomiting	21	18	32	28	0.75 ^{NS}	0.66 ^{NS}
Conjunctivitis	-	-	15	13	-	0.50 ^{NS}
Headache	25	17	45	23	2.00 [*]	3.66 ^{**}
Abdomen pain	13	16	27	23	0.75 ^{NS}	0.80 ^{NS}

*-P 0.05, **-P 0.01,

NS- Non-Significant,

4.4.2 Utilization of Health Services for Rural Girls

Table 14 Modes of treatment adopted by rural parents in treating the ailments of their daughters

Mode of treatment for ailments	Per cent of families		*Z ¹ Value
	Low-middle SES (100)	Middle SES (100)	
Household remedies	100	100	-
i) Treatment from- PHC Staff	20	34	1.00 ^{Ns}
ii) Private Ayurvedic Doctors	25	18	1.75 ^{Ns}

Ns- Non-Significant.

Utilization of health services by rural families for treating their daughters during ailments are mentioned in Table 14. All the families in both the SES groups try out first household remedies which is a customary practice for treating ailments of all kinds of their daughters. If still not reduced, sick girls were referred to PHC staff for treatment by above 80% families in both the SES groups. Twenty five per cent and eighteen per cent families in low-middle and middle SES groups resorted private Ayurvedic

Practitioners for seeking medical aid when no improvement was found in girls health condition despite the use of household remedies and allopathy treatment. There was no difference between the low-middle SES families in utilization of various sources for treating their daughters for different health problems.

4.4.3 Types of Care Given to the Girls During Ill-health

The types of care given to the rural girls by their families during ill-health period are illustrated in Table 15.

Table 15 Types of care given to the rural girls by their families during ill-health period

Particulars	Per cent of families		Z ² Value
	Low-middle SES (100)	Middle SES (100)	
Providing Prescribed medicine	72	65	0.26 ^{NS}
Offering Special food	60	72	2.00 [*]
Reduction in work load	65	78	2.16 [*]
Providing sufficient rest	78	90	5.00 ^{**}

*-P < 0.01, **-P < 0.05, NS- Non-Significant

Above 60% and 72% families in low-middle and middle SES groups respectively gave special attention to their daughters during sick period by giving prescribed medicine, providing special food, such as milk and bread, Kheer, Sheera, Khichadi, reducing work load such as domestic work, farm work, animal care work etc. and making their daughters to rest for sufficient amount of time. Seventy eight per cent families in low-middle SES and 90% families in middle SES had positive attitudes toward their daughters during ill-health period, while the rest had negative attitudes.

It is inferred from the above results (table 13,14,15) the cough and cold, fever, injuries/ cuts and burns were the commonly encountered health problems among rural girls. Majority of the rural families in both the SES groups made use of customary household remedies and the facilities of Primary Health Centre for treating illness of their daughters and also provided enough care to them.

4.5 Activity and Time Spending Patterns of Rural Girls

4.5.1 A cross-checking of Data Reported by Rural Girls on Activity and Time Spending Patterns.

Prior to the analysis of data collected on activity and time-spending of rural girls, comparison was made between the activities reported by the rural girls (n=40)

and the recorded activities of same girls by the investigator through naturalistic observation (from dawn to dusk) to arrive at percentage of consensus (agreement). The results are indicated in annexure VII . The percentages of agreement for all activities of all the 40 girls was above 94% except 87% for one girl. The percentages of agreement indicate that the reported information of girls (respondents) on activity pattern is highly reliable and valid.

Similarly correlation was worked out between reported time-spending pattern (respondent) and observed time-spending pattern (Investigator) of rural girls. Calculated 'r' values and calculated 't' values (annexure VI) reveal that there was no difference in the reported and recorded time-spending patterns of rural girls. Hence, it is reliable.

4.5.2 Classification of Activities of Rural Girls


The collected data on activities and time-spending patterns of rural girls of low-middle and middle SES groups are given age-group wise in table 16. All the activities generally performed by the rural girls in both the groups are classified under different heads such as Personal  care, Domestic work, Sibling care, school work , Farm work, Animal care, Collection of fuel or cow-dung, Play/Recreation and Sleep and Rest.

TABLE 16. The activity and time — spending patterns of rural girls

Activities	Girls age in (years) and mean time (min) spent on activities										t' / t' values for over all mean time
	n			n			n			Over all mean time + S.D.	
	(100)			(100)			(100)				
	7-9 (35)	10-12 (35)	13-15 (30)	7-9 (35)	10-12 (35)	13-15 (30)	7-9 (35)	10-12 (35)	13-15 (30)		
Personal care	100 65.00 ± 6.61 (35)	61.88 ± 7.10 (35)	61.56 ± 4.89 (30)	62.31 ± 7.37 (35)	63.94 ± 7.34 (35)	63.00 ± 6.39 (30)	62.31 ± 7.37 (35)	63.94 ± 7.34 (35)	63.00 ± 6.39 (30)	63.09 ± 7.04 (100)	NS 0.07
Domestic work	100 261.66 ± 28.43 (35)	308.80 ± 19.35 (35)	331.53 ± 27.53 (30)	268.14 ± 25.55 (35)	309.14 ± 23.28 (30)	315.27 ± 32.03 (30)	268.14 ± 25.55 (35)	309.14 ± 23.28 (30)	315.27 ± 32.03 (30)	296.63 ± 34.03 (100)	NS 0.48
Sibling care	47 47.79 ± 7.24 (24)	50.72 ± 7.20 (18)	60.00 ± 8.22 (5)	56.75 ± 8.23 (24)	45.38 ± 8.57 (13)	56.85 ± 6.25 (7)	56.75 ± 8.23 (24)	45.38 ± 8.57 (13)	56.85 ± 6.25 (7)	53.40 ± 9.48 (44)	NS 1.81
School work	75 261.13 ± 59.93 (25)	273.45 ± 13.52 (31)	299.47 ± 16.93 (19)	272.41 ± 12.14 (27)	277.37 ± 13.75 (30)	301.68 ± 26.11 (25)	272.41 ± 12.14 (27)	277.37 ± 13.75 (30)	301.68 ± 26.11 (25)	283.15 ± 21.76 (82)	NS 1.44
Farm work	81 63.93 ± 8.18 (29)	57.86 ± 7.61 (29)	61.95 ± 6.77 (23)	63.40 ± 9.16 (25)	55.66 ± 6.81 (18)	60.57 ± 6.13 (7)	63.40 ± 9.16 (25)	55.66 ± 6.81 (18)	60.57 ± 6.13 (7)	60.22 ± 8.64 (50)	NS 0.64
Animals care	78 63.39 ± 5.64 (28)	60.86 ± 6.65 (30)	59.60 ± 8.31 (20)	61.35 ± 8.54 (20)	62.72 ± 9.28 (25)	61.11 ± 7.23 (26)	61.35 ± 8.54 (20)	62.72 ± 9.28 (25)	61.11 ± 7.23 (26)	61.74 ± 8.28 (71)	NS 0.24
Collection of fuel & cowdung	27 32.40 ± 5.59 (5)	30.73 ± 3.21 (15)	27.85 ± 2.34 (7)	34.25 ± 4.34 (4)	27.66 ± 2.51 (3)	27.33 ± 2.06 (6)	34.25 ± 4.34 (4)	27.66 ± 2.51 (3)	27.33 ± 2.06 (6)	29.53 ± 4.27 (13)	NS 0.61
Play/recrea- tion	100 171.03 ± 20.76 (35)	173.74 ± 37.84 (35)	166.27 ± 39.62 (30)	179.91 ± 12.84 (35)	178.77 ± 40.02 (35)	167.23 ± 55.41 (30)	179.91 ± 12.84 (35)	178.77 ± 40.02 (35)	167.23 ± 55.41 (30)	175.71 ± 39.21 (100)	NS 1.00
Sleep/Rest	100 494.57 ± 18.34 (35)	493.74 ± 15.58 (35)	474.50 ± 16.57 (30)	498.57 ± 17.47 (35)	491.57 ± 25.94 (35)	477.93 ± 25.92 (30)	498.57 ± 17.47 (35)	491.57 ± 25.94 (35)	477.93 ± 25.92 (30)	489.93 ± 24.57 (100)	NS 0.53

NS = Non-significant * Figures in parentheses indicate number of girls performed those activities

All the personal activities like brushing, bathing, eating, drinking, grooming etc were considered personal care; cleaning vessels, house, grains, cooking, washing clothes, stitching/mending, marketing vegetables/provisions, powdering grains run-errands etc were included under domestic work; feeding, bathing, clothing, carrying and engaging siblings were classified as sibling care; School working hours, doing school related assignments, studying at home etc were the activities under school work; sowing, weeding, harvesting, filling farm yield up into bags/baskets, were the activities included under farm work; under animal care, cleaning domestic animals, giving water/fodder to them, cleaning their shelter, grazing, collection of fodder from farm etc were considered. Collecting dry branches, weed, other agricultural waste and cow dung, making cow-dung cakes were covered under head collecting fuel and cowdung; playing, chit-chatting, visiting friends/neighbours, watching TV, watching idly etc included under play/recreation; Day time nap and sleep are considered under sleep and rest.

4.5.3 Analysis of Activity and Time-spending patterns of Rural Girls (Socio-Economic Status^{and age-group} wise)

It is evident from the table 16 that all the girls irrespective of their age in low-middle SES group spent maximum time 299.12 ± 38.41 minutes on

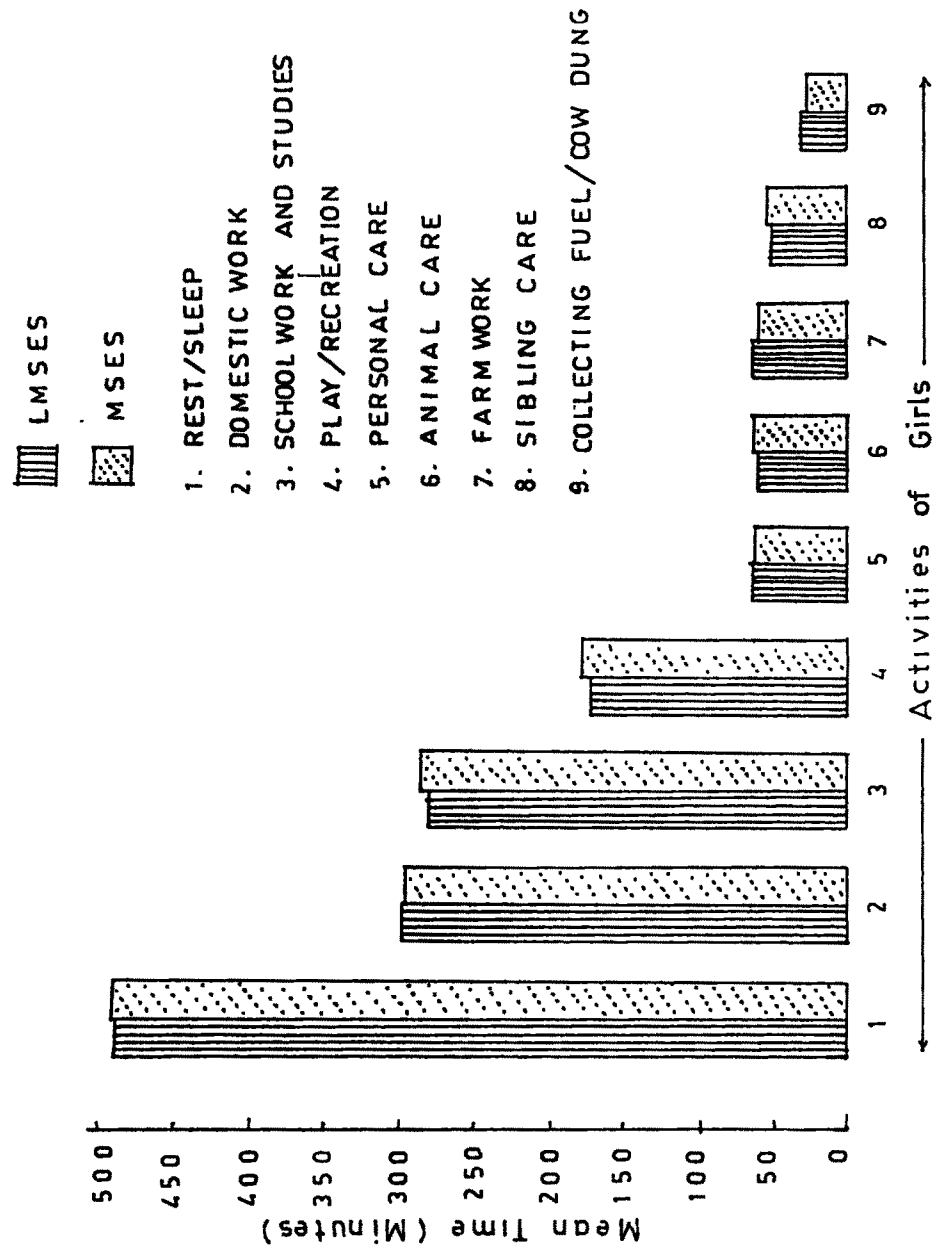


Fig.3. COMPARISON OF ACTIVITY AND TIME SPENDING PATTERNS OF RURAL GIRLS

domestic work, 176.55 ± 33.30 minutes on play/recreation, 276.00 ± 37.57 minutes on school work by all the school going girls (75) besides 488.26 ± 19.01 minutes on sleep/rest while minimum time of 38.29 ± 63.77 were spent on collection of fuel/cow-dung by 27 % girls. Above 78 % girls were engaged in animal care and farm work for about 61.44 ± 6.87 and 61.19 ± 7.95 minutes respectively. For personal care 63.02 ± 6.51 minutes (100 %) and 50.23 ± 8.08 minutes for sibling care were incurred by all the girls (100 %) and 47 % girls respectively.

In middle SES group, maximum time of 296.63 ± 34.03 minutes and 283.15 ± 21.76 minutes were spent on domestic work and school work by 100 % and 82 % rural girls respectively, besides everybody spending 489.93 ± 24.57 minutes on sleep/rest. Mean time of 175.71 ± 39.21 minutes were spent on play/recreation by all the girls in middle SES followed by on personal care 63.09 ± 7.04 minutes (100 %), on animal care 61.74 ± 8.28 minutes (71 %), on 60.22 ± 8.64 minutes (50 %), on sibling care 53.40 ± 9.48 (44 %) and in collection of fuel and cowdung 29.53 ± 4.27 minutes (13 %) respectively.

Overall there was no significant difference in the activity and time spending pattern of the rural girls belonged to low-middle and middle SES groups, when compared irrespective of their ages, however, relatively more number of girls in low-middle SES group did seasonal farm work and collection of fuel and cowdung activities as compared to middle SES group girls. Hence, socio-economic status of the selected rural girls did not have significant impact on the activity pattern and time-spending patterns of the rural girls.

Comparison was made of time spending pattern of rural girls of selected three age-groups between low-middle and middle SES groups. It reveals that in 7-9 years age group (Annexure- IV), in middle SES group girls spent 4 to 15 % time (minutes) more on sibling care, school work, play and recreation and collection of fuel and cow-dung, as compared to same age group girls in low-middle SES group. On the other hand in 10-12 years age group, the low-middle SES girls spent about 11 % extra time (minutes) on sibling care, and fuel and cow-dung collection and in age group 13-15 years girls spent 12 % extra time (minutes) on domestic work than their counterparts in middle SES group.

The results indicate that in low-middle SES, girls age to some extent influenced the time-spending pattern of rural girls particularly on activities like sibling care, domestic work and fuel collection at various age levels.

Table 17. Activity and time-spending patterns of school going and non-school going rural girls.

Activities	n (100)	Mean time (minutes) spent by girls						't' value
		Low-middle SES		n (100)	Middle SES		't' value	
		Mean \pm s.d. SS (75)	NS (25)		Mean \pm s.d. SS (82)	NS (18)		
Personal care	100	62.76 \pm 05.88 (75)	62.48 \pm 06.77 (25)	63.28 \pm 07.26 (82)	62.04 \pm 05.72 (18)	100	0.19 ^{NS}	0.67 ^{NS}
Domestic work	100	275.50 \pm 21.12 (75)	307.57 \pm 28.94 (25)	294.31 \pm 25.80 (82)	313.91 \pm 44.00 (18)	100	5.97 ^{**}	2.68 ^{**}
Sibling care	47	51.27 \pm 06.41 (30)	52.48 \pm 04.87 (17)	53.18 \pm 08.07 (36)	51.58 \pm 06.74 (7)	44	0.43 ^{NS}	0.56 ^{NS}
School work	75	278.08 \pm 27.12 (75)	—	283.82 \pm 17.83 (82)	—	82	—	—
Farm work	81	58.98 \pm 07.04 (56)	66.67 \pm 05.30 (25)	60.93 \pm 07.25 (34)	63.36 \pm 05.12 (16)	50	5.28 ^{**}	1.27 ^{NS}
Animal care	78	60.35 \pm 07.01 (58)	63.16 \pm 06.37 (20)	60.87 \pm 08.42 (39)	63.34 \pm 07.20 (22)	61	1.67 ^{NS}	1.26 ^{NS}
Collection of fuel & cowding	27	32.05 \pm 08.14 (18)	29.16 \pm 02.62 (9)	27.83 \pm 02.27 (5)	31.05 \pm 02.67 (8)	13	2.47 ^{**}	2.25 ^{**}
Play/recreation	100	158.40 \pm 11.99 (75)	215.60 \pm 18.47 (25)	161.73 \pm 12.12 (82)	246.21 \pm 26.96 (18)	100	18.53 ^{**}	21.74 ^{**}
Sleep/Rest	100	485.22 \pm 14.80 (75)	488.84 \pm 15.37 (25)	488.08 \pm 22.48 (82)	495.53 \pm 12.86 (18)	100	0.32 ^{NS}	1.44 ^{NS}

* SS = School going

** NS = Non-school going

NS = Non-significant

** = P < 0.05

Figures in parentheses indicate number of girls performed those activities

4.5.4 Analysis of Activity and Time-Spending Patterns of Rural Girls (School-Enrollment wise)

The activity and time-spending patterns of school-going and non-school going rural girls of both the SES groups are described in Table 17. It is evident from the table that in low-middle SES groups, non-school going girls spent significantly more time on domestic work, collection of fuel and cow-dung and on play/recreation by non-school going rural girls. These results are in line with the findings of Burra (1989), Ramana (1990) and Subramaniam (1991). The results conclude that school-enrollment has significant impact on time-spending pattern of rural girls.

It is inferred from the above findings (Table 16, 17) that the activity and time-spending patterns of selected rural girls found to be same irrespective of the SES of families. The rural girls found to be engaged in domestic work (4-5 hours), school work (4 - 5 hours) by only school going girls, play and recreation (2-3 hours), animal care (about 1 hour), farm work (about 1 hour), collection of fuel and cow-dung (about 1/2 hour) besides routine activities of personal care, (1 hour) sleep and rest (about 8 hours). As majority of the selected rural girls belonged to the nuclear type families they were forced to assist their parents in domestic work

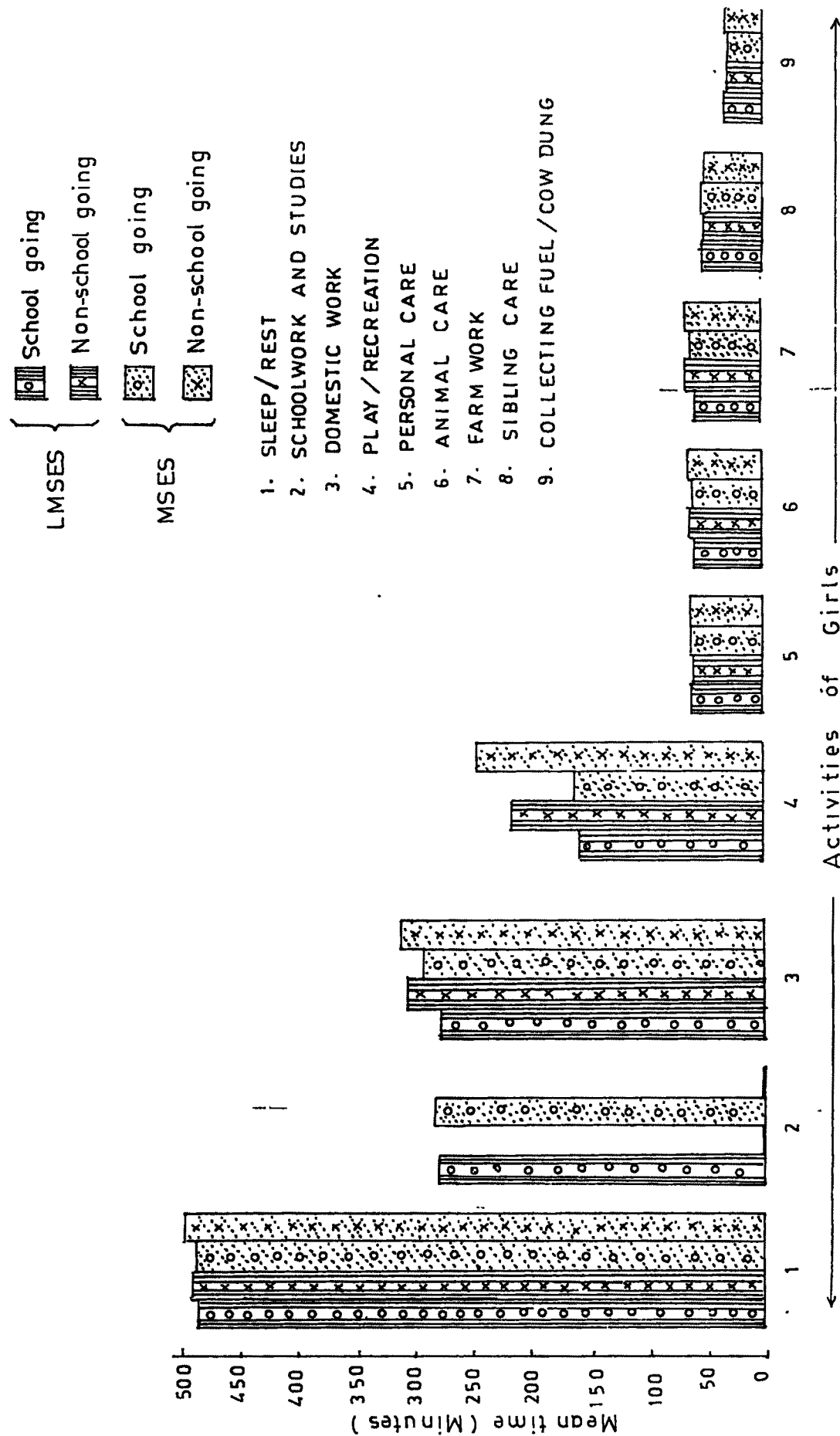


Fig 4. COMPARISON OF ACTIVITY AND TIME SPENDING PATTERNS OF SCHOOL GOING AND NON-SCHOOL GOING RURAL GIRLS

sibling care and being belonged to agriculturist families they were also involved in seasonal farm work, animal care and collection of fuel/cow-dung. The socio-economic status of the selected rural girls had no influence on the activity and time-spending patterns of rural girls. On the other hand school enrolment of rural girls had significant impact on the same when compared the activity and time-spending patterns of school going girls with that of non-school going girls.

4.6 Investments and Efforts Made by Rural Parents in Educating Their Daughters.

4.6.1 School Enrolment and Educational Placements of Girls.

The selected rural girls in both the SES groups were distributed into sub-groups on the basis of their age, school enrolment and educational placement. (Table 18).

Table 48 School enrollment and educational placement of the rural girls

A. School enrollment

Girls age (years)	N	Girls (%) enrolled in school		Value	Girls (%) Not-enrolled in school		
		Low-middle SES (100)	Middle SES (100)		Never enrolled Low-middle SES (100)	Low-middle SES (100)	School Dropout Middle SES (100)
7-9	35	74.42	77.14	1.00 ^{NS}	28.58	22.86	-
10-12	35	88.57	85.71	0.75 ^{NS}	11.43	-	14.29
13-15	30	63.33	83.33	4.06 ^{**}	23.33	8.34	8.34
Total girls	100	75.00	82.00	1.75 ^{NS}			

**P < 0.01, NS= Non-Significant

B) Educational Placement of girls in school.

Girls age- groups (years)	1-3 Standard		Per cent of girls 4-6 Standard		7-9 Standard	
	Low-middle SES (100)	Middle SES (100)	Low-middle SES (100)	Middle SES (100)	Low-middle SES (100)	Middle SES (100)
7-9	100	100	0	-	-	-
10-12	-	-	100	100	-	-
13-15	-	-	-	-	100	100

Table 18 depicts that in low-middle SES group in the age ranges 7-9 years, 10-12 years, 13-15 years, 71.42 per cent, 68.57 per cent and 63.33 per cent girls respectively were enrolled in school, and attended the school though not regularly, while rest were never enrolled in school and school-dropouts. The corresponding figures for school enrollment of girls in middle SES group were 77.14 %, 65.71 % and 63.33 Per cent. Relatively more number of girls in low-middle SES were enrolled in school as compared to the girls in middle SES group. Regarding the educational placement of school enrolled girls, in both the SES groups all were in 1-3 standard, 4-6 standard and 7-9 standard at the age of 7-9 years, 10-12 years and 13-15 years respectively.

4.6.2 Reasons Reported by Rural Parents for Enrolling and Not Enrolling Their Daughter in school.

The reasons reported by the sample parents for enrolling and not enrolling in school and dropping out their daughters from school are explained in table 19

Table 19 Reasons reported by Rural parents for Enrolling and not-enrolling their daughters in school

Reasons	Per cent of parents		t ² Value
	Low-middle SES (100)	Middle SES (100)	
A. For enrolling	n = 75	n = 62	
To make daughter self-sufficient in 3 R's	86.66	91.45	1.25 ^{Na}
To make daughter lead a better life	93.33	97.56	1.33 ^{Na}
Realisation that education is a basic need	66.66	87.80	4.20 **
Can get a good match	86.66	87.80	*
B. For not-enrolling	n = 25	n = 18	
No value for girls education	92.00	66.66	2.16*
Waste of time and money	80.00	55.55	1.73 ^{Na}
Baby sitting	64.00	33.34	14.48**

* $P < 0.01$, ** $P < 0.05$, Na-non-significant

Out of 75 per cent and 82 per cent parents in low-middle and middle SES groups who enrolled their daughters in school for educating them stated that once their daughters are educated they might lead a better life as they become smarter and manage their homes better (93.33 % and 97.51 %) followed by they become self-sufficient in reading, writing and arithmetic (3 R's) unlike them (86.66 % and 91.46 %). It improves the chance of getting a good prospective husband to them (86.66 % and 87.89 %) and the realisation that education is a basic need even for girls (66.66 % and 87.89 %) respectively.

On the other hand 80-92 per cent parents in low-middle SES group and 55.67 per cent parents in middle SES group reported that they had not enrolled their daughters in school/discontinued their education as they do not hold value for girls education, it is mere waste of time and money, at least being at home they can learn domestic and other work which fetches them a lot in future. About 64 per cent parents in low-middle SES and about half of it, parents in middle SES reported that they didn't enroll in school/discontinued their daughters education as they were required to baby sit to their younger siblings.

Similar trend of results were reported in the study of Hati (1992) that girls are neglected a lot in the field of education. While Kulkarni (1991) found in his study, the reasons for not enrolling and dropping out were, girls were required to help at home, poverty and inability to afford education and parent's lack of interest in education.

4.6.3 Investments and Efforts Made by Rural Parents for Educating Their Daughters

Table 20 Investments and efforts made by rural parents
for educating their daughters

Investments and Efforts	Per cent of parents		'Z' Value
	Low-middle SES (75)	Middle SES (82)	
a) Money incurred on purchase of educational materials/year			
Rs. 150-250	9.33	7.31	0.40 ^{Ns}
Rs. 250-350	61.33	31.70	4.29 ^{**}
Rs. 350-450	29.33	60.97	4.42 ^{**}
b) Supervision of studies	73.33	91.46	3.60 ^{**}
c) Assisting in studies	29.33	35.36	1.00 ^{Ns}
d) Providing enough time for studies	100.00	100.00	-
e) Helping in daughters work in order to send to school in time	30.00	53.65	3.28 ^{**}
f) Provision of essential materials			
Note Books	100.00	100.00	-
Text Books	80.00	80.55	-
Pen/pencil	100.00	100.00	-
Good clothing	100.00	100.00	-
Uniform	66.66	78.04	2.00 ^{**}
Protecting material from rain	46.66	97.56	10.20 ^{**}
g) Provision of essential materials in time and solving school related problems in time	78.66	87.80	1.80 ^{Ns}
h) Valuing and encouraging studies	74.00	98.00	6.00 ^{**}

* - P 0.05, ** - P 0.01, Ns-Non-significant

Table 20 indicated the investments and efforts made by rural parents for educating their daughters. As seen from the table rural parents had incurred minimum of Rs. 150/annum and maximum of Rs. 450/annum exclusively on purchasing of educational materials (text books and other stationary) and no money incurred on tuition fee as in schools, education was given at free of cost. However, significantly more number of parents in low-middle SES incurred Rs. 250-350 and in middle SES group it was Rs. 350-450. About 73.33 per cent and 91.46 per cent parents in low-middle and middle SES groups respectively made efforts to supervise their daughters studies by visiting their school now and then, and enquiring from classteachers about their performance and steps to be taken for improvement. About 29.35 per cent parents in both SES groups provided assistance to their daughters by requesting teachers/educated persons in neighbourhood to help them out in studies as they could not help due to their illiteracy and low-literacy level and business. All the parents in both SES groups provided enough time for studies to their school-going daughters (2-3 hours in a day). Thirty per cent and 54 per cent parents, specially mothers in low-middle and middle SES groups respectively

were keen about daughter's education and hence helped in their daughter's work to accomplish early in order to send them to school in time.

Regarding provision of essential materials to school-going girls, in both the SES groups all the parents tried their best to provide good clothing, note books, pen, while provision of text books to girls was about 80 per cent.

Majority of the parents in middle SES group and 46 per cent parents in low-middle SES group provided protective materials such as plastic coated jute bags, polythene bags and portable small umbrella to their school-going daughters in rainy season in order to send them to school regularly. However, essential materials were supplied to the girls in time by 70-88 per cent parents in both the SES groups. Education to girls was valued by 74 per cent low-middle SES and 98 per cent middle SES rural parents and these parents encouraged their daughters to study atleast upto 10th class as such facility is available to them in their respective villages.

'2' test reveals that significantly more number of rural parents in middle SES group made more investments and efforts on certain aspects

related to educating their daughters as compared to parents of low-middle SES.

It is inferred from the above results (table 18, 19, 20) that there was no difference in school enrollment of girls belonging to the age groups 7-9 years, and 10-12 years in the both SES groups while 13-15 years significantly more number of girls in middle SES were enrolled as compared to low-middle SES girls. Significantly more number of middle SES group parents made more investments and efforts in educating their daughters as compared to low-middle SES group. The reasons common for majority of the girls for not going to school regularly were their ill-health, festivals, marriages of family members/relatives and arrival of relatives to home. The main reasons reported by parents for enrollment of girls in school were that they become smarter and manage their home better once educated, become self-sufficient in 3 R's and increase the chance of getting a good husband and reasons for not-enrolling girls in school. The main reasons for not enrollment were no value for education, waste of time and money as they don't acquire skills of practical importance and sibling care.

4.6.4 Reasons Reported For Not Going To School Regularly by the Respondents

Table 21 Reasons stated for not-going to school regularly by the respondents

Reasons	Age range and per cent of girls				Middle SES		Total	13-15 (25)	Total (82)	'21 Value
	7-9 (25)	Low-middle SES (100) 10-12 (31)	13-15 (19)	Total (75)	7-9 (27)	10-12 (30)				
Seasonal farmwork	40.00	41.93	26.31	37.33	40.74	43.33	36.00	40.24	0.42	
Baby sitting	68.00	12.90	05.26	09.33	03.70	10.00	-	04.87	-	0.00
Ill health	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	-
Festivals	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	-
Marriages	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	-
Arrival of relatives	88.00	96.77	100.00	92.59	92.33	93.33	08.00	67.07	5.00**	

** P < 0.01 * Ns= Non-Significant.

Reasons reported by the respondent for not going to school regularly are given in table 21. It is obvious from the table that in both the SES groups all the girls did not go to school whenever they were sick, on festival days and on the days of their family members/relatives marriages. Arrival of relatives to their homes was a reason to the girls for not going to school in 92.59 per cent and 67.07 per cent families of low-middle and middle SES groups respectively. While seasonal farm work was a reason to 37-40 per cent girls in both the SES groups could not go to school regularly as they were required to baby sit to their younger siblings now and then, due to their mother's work. Overall there was not much difference in the reasons stated for not attending school, age range wise of girls in both the SES groups.

4.7 Parental Attitudes Towards Their Daughters

Table 22 Attitudes of rural parents towards their daughters

Attitudes	Per cent of parents		'Z' value
	low-middle SES (100)	middle SES (100)	
Positive	(88)	(79)	
Easy to bring up	23	18	1.25 ^{Ns}
Reciprocate well love and affection	27	17	2.50 ^{**}
Gets fame to family	38	44	1.00 ^{Ns}
Negative	(165)	(165)	
Expensive child	100	100	-
Bringing up daughter is mere waste	65	69	-

** - $P < 0.05$, Ns-Non-significant

4.7.1 Attitudes of Rural Parent's Towards Their Daughters

Attitudes of parents towards their daughters are indicated in table 22. Relatively majority of parents expressed negative attitudes towards their daughter in both the SES groups than the positive attitudes. All the parents in both the SES groups expressed that daughters are expensive as they need to give good amount of dowry for getting them married to settle their lives despite of investing a lot in bringing them up. Similar attitude was quoted in girl child; Need for integrated view. NIPCCD (1988). Sixty five to sixty nine per cent parents reported that bringing up a girl is a mere waste as she is a temporary guest in the family, and customarily she serves only for husband's family after marriage and does not shoulder her parent-home responsibilities. However, on the other hand in low-middle SES group 23 per cent, 27 per cent and 38 per cent parents respectively stated that bringing up girls is a easy task, daughters reciprocate well love and affection and get fame to mafamily by serving at husband's home. The corresponding percentages in middle SES group were 44 per cent, 17 per cent and 18 per cent. It was interesting to note that as compared to middle SES group significantly more number of low-middle SES group parents expressed positive attitude that daughters reciprocate love and affection well. Socio-economic status of parents of the selected girls found to have no influence on the parental attitudes towards their daughter in rural area.

4.7.2 Expectations From Daughters of Rural Parents

Table 23 Expectations from daughters of rural parents

Parameters	Per cent of Parents		t value
	low-middle	middle	
	SES (100)	SES (100)	
<u>Qualities appreciated</u>			
Loving and Affectionate	100	98	-
Sacrificing	58	78	3.35**
Generous	67	73	1.00 ^{Ns}
Social and extrovert	71	74	0.50 ^{Ns}
Religious	99	95	2.00*
Obedient	86	81	1.00 ^{Ns}
Mind and do own work well	95	97	1.00 ^{Ns}
Have good company	63	68	0.83 ^{Ns}
<u>Expectation from daughters</u>			
Good at house work	100	100	-
Good at child-care	100	100	-
Good at studies	67	77	1.66 ^{Ns}
Talk less with others	28	33	0.83 ^{Ns}
Do all work well	63	63	0.33 ^{Ns}

** $P < 0.05$, * $P < 0.01$, Ns-Non-significant.

Table 23 described about the expectations from daughters of rural parents. Overall, there was no significant difference in the expectations of rural parents from their daughters. The qualities

appreciated of girls in both the SES groups were loving and affectionate (98-100 %) followed by being religious minded (95-99 %), do work well (95-97 %), obedient (81-86 %), by social and extrovert (74-74 %), generous (67-73 %), be in good company and sacrificing (58-78 %). However, significantly more number of parents in middle SES group desired their daughter to have sacrificing nature as compared^{to} low-middle SES group.

Regarding expectations from daughters all the parents (100 %) in both the groups wanted their daughters to be good at house work and child care while 67 per cent and 77 per cent parents in low-middle SES and middle SES groups expected daughters to do well in studies, 65 per cent and 63 per cent expected girls should do all work well, and 28 per cent, and 33 per cent wanted them to talk less with others respectively.

Further it was also recorded that in low-middle SES group majority of the (above 90 %) parents wanted to perform their daughter's marriage at age ranges 15-16 and 18-19 years, where as in middle SES group parents wanted it between 18 and 22 years age by giving them to prospective grooms who have sound family background and good amount of property and economical independent.

From analysis of 'Z' test it can be concluded that no significant difference was found in the expectations from daughters of rural parents in both the SES groups. Some of these findings are similar to conclusions made in the study of Majumdar (1990).

All the rural parents in both SES groups wanted their daughters to be good housewives in future and none of them expressed that daughters should take up some or other employment in future.

SUMMARY

CHAPTER 5

SUMMARY

An attempt was made to study " A profile of Rural Girls of Parbhani District " of Marathwada region with the following objectives :

1. To collect data on growth of rural girls in Parbhani District in order to investigate their growth pattern and to compare it with NCHS (National Centre for Health Statistics) standards.
2. To study the general meal pattern of rural girls.
3. To find out the general health problems and care taken of rural girls.
4. To analyse activity and time-spending patterns of rural girls.
5. To study the investments and efforts made by rural parents in educating their daughters and rural parent's attitudes towards their daughters.

A stratified random sample of 200 families having a daughter in the age-range of 7 to 15 years were selected from randomly chosen ten villages, each two villages from randomly chosen five talukas of Parbhani District of Marathwada region. Out of 200 rural girls, 100 belonged to low-middle SES strata, while the remaining to middle SES strata. The data were collected from the selected girls and their parents by implementing survey through personal interview method by investigator on the basis on finalised structured schedule; by naturalistic observation of 20 per cent of sample girls (40) from dawn to dusk and by following standard procedures for taking anthropometric measurements (weight and height)

in their homes. The collected data were pooled, analysed statistically, tabulated and discussed under the following heads.

General Information of Parents of Rural Girls.

It is evident from the study that in both the socio-economic status groups majority of the parents were cultivators and were in the age group of 30 to 40 years. Majority of the mothers in both the groups were illiterate while majority of fathers had education between primary and highschool level. Seventy four per cent parents in both the groups had nuclear type families. In low-middle SES majority of the parents had annual income of Rs. 25,000 to 35,000. On the other hand in middle SES it was Rs. 40,000 to 50,000.

Mean ages and Distribution of Girls.

It was found that in low-middle SES the girls lowest mean age was 7.4 years and highest mean age was 15.2 years, while in middle SES group the corresponding mean ages were 7.4 years and 15.3 years respectively. Distribution of girls for each mean age across 7-15 years was ranged from 5 to 16 in both the groups.

Growth Pattern of Rural Girls and its comparison with NCHS Data.

Regarding height of rural girls, it was found that the mean height (Cm) of girls was 109.93 ± 6.70 at 7 + and 156.25 ± 3.94 at age 15 + in low-middle SES group and the corresponding mean heights in middle SES group were 114.50 ± 6.50 and 154.50 ± 4.20 respectively. No significant difference was found between the mean heights of the rural girls belonging to both the SES groups. Regarding weight at the age 7 + years rural girls had mean weight (Kg) 17.42 ± 1.46 and at the age 15 years it was 42.75 ± 3.77 the corresponding mean weights in middle SES group were 18.17 ± 3.38 and 40.75 ± 1.53 respectively. Though the rural girls in middle SES group observed to have relatively better heights and weights compared to low-middle SES group statistically the difference was not significant. In comparison with NCHS standards rural girls in both the SES groups found to have significantly shorter stature and less body weights. In low-middle and middle SES groups 49 per cent and 64 per cent rural girls belonged to the classification of normal height-NCHS, while 88 per cent girls in middle SES and all the girls in low-middle SES were categorised as having got subnormal growth based on their percentages of

standard weight and on the basis of their percentages of standard weight/height, all the rural girls belong^{ed} to subnormal growth category irrespective of their SES. This might be due to their habitual poor dietary pattern in the age-group of 7 to 15 years which subsequently might have deprived them of the "Second opportunity" which nature offers to the children to overcome deficits in growth during puberty and adolescence with additional inputs over and above their habitual dietary pattern.

General Meal Pattern of Rural Girls.

It was recorded that in both the SES groups majority of the girls had two times meal in a day i.e. afternoon and night besides only a cup of tea which was invariably taken in morning hours. Majority of the girls in lunch had 2-3 chapaties, 1-2 katories rice, half to one teaspoon of thecha/ chutney were generally taken. In dinner, 1-2 jowar roti along with one teaspoon thecha/pickle/pittla/ left over dhal and curry or else 2-3 katories khichadi with 1-2 teaspoon pickle/thecha were consumed. It was also noted that all the selected rural girls were strictly vegetarians hence consumed some of the items under all food groups except meat and meat products. It^{was} also noted that majority of the selected girls were not provided with balanced

and sufficient amount of food. None of the girls in low-middle SES and only 12 per cent girls ^{in middle SES} found to be well-nourished. When classified into various groups of malnutrition based on their percentages of standard weight (NCHS) as per the classificatory scale of Gomez (1987).

Health problems and Care Taken of Rural Girls.

It is noted from the study that cough and cold, fever, injuries/cuts and burns were commonly encountered health problems among selected rural girls. Majority of the rural families in both the SES groups made use of customary household remedies and facilities of primary health centres for treating ailments of their daughters and also provided enough care to them.

Analysis of Activity and Time-Spending Patterns of Rural Girls.

The findings of the study revealed that activity and time-spending patterns of rural girls were similar in both the SES groups. The rural girls recorded to be engaged in domestic work (4.90 to 4.93 hours) school work (4.60 to 4.71 hours) play and recreation (2.83 to 2.91 hours), farm work (1.01 to 1.0 hours) collection of fuel and cow-dung (About half an hour) besides routine activities of personal care (1.03 to 1.06 hours) sleep and rest (8.10 to 8.15 hours).

As majority of the selected rural girls belonged to the nuclear type family they were forced to assist their parents in domestic work, siblingcare and being belonged to small and marginal farmers they were also involved in seasonal farm work, animal care, and collection of fuel and cow-dung. Socio-economic status of the selected g rural girls had no influence on the activity and time-spending patterns of rural girls. On the other hand school enrollment of rural girls had significant impact on the same when compared the activity and time-spending patterns of school-going girls with that of non-school-going girls.

Investments and Efforts made by Rural Parents in Educating their Daughters and Rural Parents Towards Their Daughters.

The findings of the study reveal that there was no difference in the school enrollment of the girls belonging to the age-groups 7-9 years and 10-12 years in both the SES groups, while in the age group 13-15 years significantly more number of girls in middle SES group were enrolled in schools as compared to their counterparts in low-middle SES group. Significantly ($P < 0.01$) more number of middle SES group parents made more investments and efforts in educating their daughters as compared to the parents in low-middle SES group.

The main reasons reported by parents for educating their daughters were, they become smarter and manage their homes well, become self-sufficient in 3 R's once education is given to them and the reasons given by parents for not enrolling their daughters in school were no value for education, waste of time and money as they do not acquire skills of practical importance and responsibility of baby sitting.

Irrespective of the Socio-economic Status, all the rural parents found to have negative attitudes towards their daughters as they are required to pay good amount of dowry at the time of daughters marriage, despite spending a lot in bringing them up and above 65 per cent stated that they do not have positive attitude towards daughters because daughters customarily do not shoulder the responsibility of parent home. However, 38 to 44 per cent parents in both the SES had positive attitudes towards daughters as they are easy to bring up, reciprocate well love and affection and get fame to them by serving to other homes (husband and in-laws)

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ANNEXURE - I

**SURVEY SCHEDULE TO KNOW ABOUT THE PROFILE OF RURAL
GIRLS OF PAREHANI DISTRICT.**

GENERAL INFORMATION

Name of the respondent :

Address :

Age :

Ordinal position :

Type of Family : Nuclear /Extended/Joint

Size of Family : Small/middle/large

(1-3) (3-6) (6 & above)

Height of girl :

Weight of girl :

Onset of menarche:

Details about family :

Sr.No.	Family member	Age	Gender	Education	Occupation	Income annum
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Details of meal pattern of the subject

	Day before Yesterday	Yesterday	Generally
	Details	Quantity	Details
Morning			
Afternoon			
Evening			
Night			

What all are your generally consumed foods ?

- | | | | | |
|----|------------------------|-------|----------|--------|
| 1) | Cereals | often | sometime | Rarely |
| | Rice | | | |
| | Jowar | | | |
| | Wheat | | | |
| | Bajra | | | |
| | Any other | | | |
| 2) | Pulses | | | |
| | Redgram | | | |
| | Greengram | | | |
| | Bengalgram | | | |
| | Blackgram | | | |
| | Anyother | | | |
| 3) | Green leafy Vegetables | | | |
| | Palak | | | |
| | Motha | | | |
| | Chuka | | | |
| | Ambedi | | | |

Barbaro

Karadi

Tandulga

Any other

4) Other vegetables

Potato

Brinjal

Ladies finger

Reddish

Cabbage

Cauliflower

Dodhi

Anyother

5) Milk & Milk product

Milk

Curd

Buttermilk

Anyother

6) Fats & Oils

7) Any other (State please)

8) Seasonal fruits

Guava

Sugarcane

Banana

Ber

Any other

Do you get the sufficient amount of food?

If yes, when all? Morning, Afternoon, Evening, Night.

If no., Why?

Do you get the privilege of having food which you like most in the menu?

If yes, reasons?

When do you have your meals?

Timings	Alongwith family members	with siblings	Only with female members	Alone before	Alone & last
Morning					
Afternoon					
Evening					
Night					

Who usually serves you the food?

Do you feel any difference is made between you and your sister.

You and your brother in the provision of food?

What are those foods?

If yes, Why?

If No, Why?

Who all were immunized in your family? Yes/No

Sons

Daughters

If yes what all?

Polio, DPT, Measles, Typhoid, BCG, Cholera

How often do you fall sick ?

Sometime/Rarely/Always/ in a Week/ Month/Year.

From which infections you generally suffer from?

Who generally attends on you during sickness?

What does your family do in treating your sickness?

Refer to : Alopathy Doctor

 Ayurvedic Doctor

 Homeopathic Doctor

 Priest

 Visit to temples

 Use household remedies

Do you follow strictly the prescriptions of the above
referred people? yes/Strictly/ Sometimes/Never

What all they did ?

Responses of your family towards you in sickness?

Positive Details

Negative details

What type of special care did you receive during
Sickness?

Food

Workload

Medicine

Specify if other

Give the details of work what all you do from
dawn to dusk and time spent on them.

Household work

	Often Yes/No	Time	Some times Yes/No	Time	Rarely Yes/No	Time
Removing beds						
Sweeping						
Sprinkling of cowdung water in yard						
Washing utensils/ cloths						
Slapping floor with cowdung.						
Putting Rangoli						
Cleaning Chulha						
Cutting vegetables						
Keeping fuel for Chulha						
Pre-preparation for cooking (what all)						
Assistant in cooking						
Cooking (what all)						
Packing food						
Serving food						
Removing plates and cleaning place						
Cleaning utensils						
Throwing garbage in compose pit						
Fetching and filling water (Well/handpump)						

Cleaning water utensils

Selling farm products
(Specify)

Milk

Vegetables

Fruits

Carrying food to farm

Cleaning lamps

Stitching clothes

Mending clothes

Cattle work

Domestic animals &

Birds management

Cleaning place of animal

Removing Dung

Preparing dung cakes

Milking

Giving fodder/grains

Giving water to cattle/
others

Grazing animals

Taking animal for washing
(Distance)

Well

Pond

River

Child care

Bathing

Clothing

Feeding

Playing (Indoor)

Playing (Outdoor)

Toilet training

Taking to School

Bringing back from school

Making child to sleep

Anything else

Economic Activities

Fetching Fuel

Collecting dung from roadside/farm

Do you do any work apart from your own household work ? If yes what all you do ? and where ?

Particulars	Seasonal/Non- Seasonal	Relative/Non- relatives	Kind/Cash
-------------	---------------------------	----------------------------	-----------

Washing clothes			
Cooking			
Sweeping			
Fetching water			
Baby sitting			
Bringing materials from market			
Farm work (details)			
Cattle work (details)			
Anything else			

Academic Activities/study at homes

Play/Recreation

Sleep/Rest

Personal needs (Details) & Care

Personal needs

Personal care

Education

What are your school timings

Do you go to School ?

If yes in which standard ? What do you want to be ?

Do you go to School regularly ?

If no why ? When all

Seasonal work

Baby sitting

Timings of School

Sickness

Festival

Friends not going

Delivery of mother

Marriage

Guest arrived in family

Unavailability of educational materials

Distance of School

Clothings not proper

Footware

Anyother

Are you provided with all necessary educational materials ?

Note books

Text books

Bag

Pen/pencil

Uniform

Good Clothing

Footware

Transport facility

Protecting material
from rain/hot sun

Anyother

Who brought them for you ?

Do you get enough time for your studies ?

If no why ?

If yes, when ?

Who all assist you in studies ?

Does your family values your education ? If yes How ?

Helping you in your work

Asking about studies

Enquiring in school

Sending to neighbour's place to study.

Inspiring to go for higher studies

Sending to tutions

Solving school related problem immediately

Helping in sending to school in time your work for
freeing you.

Whether you attended any angenwadi/Balwadi before

Did that education motivated you for primary education.

Percentage of marks obtained in various exams.

PARENTS :

Per year how much money is incurred on your daughter's studies ?

Who spends it

How many

Own parents

Grand parents

Any other relatives

Aid from school

Any body else ?

What do you want your daughter to be ?

Till which standard you want to educate her ?

Who influenced you to send your daughter to school and to go for higher education ? Detail:

What do you think of the educational system ?

What do you think of her class teachers ?

What do you think of school facilities ?

Whether school demands unofficial fee ?

Why did not you send your daughter to school ?

Poverty

No value for education

Distance

No female teacher

Baby sitting work

Unsuitable school timings

No anganwadi/Balwadi to care younger siblings

Parental Attitudes

How many children do you have ?

How many daughters and sons ?

Are you satisfied with them ? If yes why, if no, why specify ?

Whom do you like more sons or daughters ? Why ?

Do you feel both sons and daughter require same amount and quality of food ?

Do you pay attention to your daughters and sons health
If yes how ? If no, why ?

What all essential things you want your daughter to be perfect in ?

What all

Why

Cooking

Cleaning

Looking after children

Household activities

What are the qualities you want your daughter to have ? and why ?

Cooperative

Friendly

Submissive

Obedient

Dependent

Remain in house

Independent

Religious

Sacrificing

mind only household work

Understanding

Participate in decision making

Social

Non-participate in decision making

Affectionate

Introvert

Extrovert

Broad minded

Kind-hearted

Anything else ?

When do you like to perform your daughters marriage ?

At what age

Type of marriage

What type of groom : Age

SES

Education

Would you like to consider your daughters opinion in finalizing her marriage ?

Whom do you think that they keep family name daughter/Sons
Why ?

Whom do you feel easy to bring up daughters/sons ?

Which one you feel expensive child ?

When do you feel that your responsibility towards girl is over ?

How do you distribute the work load among your children ?
(When son is there in the family)

Do you give similar degree of freedom to both sons and daughters If yes, why? If no, why ?

Please state reasons for educating your daughter.

Why do you want to have daughter/s.

Explain reasons

Why don't you like to have daughter/s.

State reasons.

Now do you want to perform your daughter's marriage ?
and with whom ? (this year)

Do you have dowry system ?

If yes what form you need to give

Dowry	Gold (how much)
	Cash (range)
	Materials (detail)
	Farm etc.

SOCIO-ECONOMIC STATUS SCALE (RURAL)**Form for investigator**

Developed by Trivedi and Parash

Total Score

Category

Respondent _____ Village _____

Age _____ Date _____ Investigator _____

INSTRUCTIONS

Please read the instructions in the manual carefully before checking on this form. Check the relevant categories by putting an 'x' in the appropriate circle on the left of a sub-item. Note that only one box is to be checked under each of the major items 1, 2, 3, 4, 5, 6 and 7. Encircle the corresponding scores given against the sub-item. Check for sub-items under items 8 and 9. Encircle the corresponding scores. Add all scores and enter the total scores in the box on the right hand top corner. Consult the manual and enter the corresponding category in the same box.

1. Caste :

- | | |
|--|------|
| <input type="radio"/> Schedule Caste | ...1 |
| <input type="radio"/> Lower caste | ...2 |
| <input type="radio"/> Artisan caste | ...3 |
| <input type="radio"/> Agricultural caste | ...4 |
| <input type="radio"/> Prestige caste | ...5 |
| <input type="radio"/> Dominant caste | ...6 |

2. Occupation :

- | | |
|--|------|
| <input type="radio"/> Labour | ...1 |
| <input type="radio"/> Caste occupation | ...2 |
| <input type="radio"/> Business | ...3 |

0	Independent Profession	...4
0	Cultivation	...5
0	Service	...6

3. Education :

0	Illiterate	...0
0	Can read only	...1
0	Can read and write	...2
0	Primary	...3
0	Middle	...4
0	High School	...5
0	Graduate	...6

4. Social participation :

0	Member of one organisation	...1
0	Member of more than one organisation	...2
0	Office holder	...3
0	Wider public leader	...6

5. Land :

0	No land	...0
0	Less than 1 acre	...1
0	1-5 acres	...2
0	5-10 acres	...3
0	10-15 acres	...4
0	15-20 acres	...5
0	More than 20 acres	...6

6. House :

0	No home	...0
0	Hut	...1
0	Katcha house	...2
0	Mixed house	...3
0	Pucca house	...4
0	Mansion	...6

7. Farm power :

0	No drought animal	+++0
0	1-2 drought animals	+++2
0	3-4 drought animals or 1 or more prestige animal	+++4
0	5-6 drought animal or Tractor	+++6

8. Material possession :

0	Bullock-cart	+++1
0	Cycle	+++1
0	Radio	+++1
0	Chairs	+++1
0	Improved Agricultural implements	+++2

9. Family :

Type		+++4
0	Single	
0	Joint	
	Size	
0	Upto 5	+++1
0	Above 5	+++2
0	Distinctive features	+++2

ANNEXURE II

Check-List for Naturalistic Observation

Name of the girl	:	Address of the girl :
Age of the girl	:	
Date of the observation :		Name of the observer :
Duration of observation -		6.30 a.m. to 6.30 p.m.
Activities		Frequency and Time required

A) Personal care and Needs

1. Brushing
 2. Bathing
 3. Clothing
 4. Grooming
 5. Having tea
 6. Having breakfast
 7. Having lunch
 8. Having snacks
 9. Having dinner
- Anything else observed

B) Domestic work

1. Sweeping
2. Sprinkling of cowdung water
3. Putting rangoli
4. Washing utensils
5. Washing clothes
6. Fetching and filling water

7. Cleaning the house
8. Cleaning Chulha
9. Slapping floor with cowdung
10. Assistance in cooking
11. Cooking
12. Making beds
13. Removing beds
14. Mending/Stitching clothes
15. Folding clothes
16. Serving food
17. Removing plates and
Cleaning Place
18. Cleaning grains
19. Milling grains
20. Shopping Vegetables
21. Shopping provisions
22. Run-errands

Anything else observed

c) Sibling/child care

1. Bathing sibling
2. Clothing sibling
3. Grooming sibling
4. Feeding sibling
5. Playing with sibling (Indoor)

6. Playing with sibling (Outdoor)
7. Taking younger sibling to mother
8. Bringing back
9. Taking to school
10. Bringing back from school
11. Carrying child to neighbourhood
12. Toilet training
13. Putting to sleep

Anything else observed

D) School work

1. Attending school (4 hrs)
2. Time for going to school and coming back from school
3. Doing school related work
4. Going to neighbourer for studying
5. Group studying
6. Discussing with friends, school related work
7. Discussing with neighbour's school related work

Anything else observed

E) Animal care

1. Cleaning animal shed
2. Removing dung
3. Giving water to animal
4. Giving fodder to animal

5. Washing animals
6. Milking
7. Grazing
8. Collection of fodder from farm or neighbourhood

Anything else observed.

F) Farm work

1. Carrying food to farm
2. Removing weed
3. Giving water to plants
4. Scaring away birds from field
5. Harvesting
6. Filling farm yfield
7. Collection of Agricultural waste

Anything else observed

G) Play/ Recreation

1. Playing with friends
2. Chit-Chatting
3. Watching TV
4. Visiting friends
5. Visiting neighbourhood-mates
6. Idelly watching

Anything else observed

H) Collecting fuel/cowdung

1. Collection of broken and dry branches
2. Collection of cowdung from roadside
3. Collection of cowdung from farm
4. Making cow-dung cakes
5. Bringing cowdung cakes
6. Collection of agricultural waste from farm

Anything else observed

I) Wage work/ Economic Activity

1. Working in others house for wage
 - Sweeping
 - Fetching
 - Cleaning grains
 - Cooking

Anything else observed

J) Sleep/ Rest

1. Taking nap
2. Just lying down
3. Sleep

ANNEXURE III**Anthropometric Measurements of Rural Girls****Low - middle SES**

Sr.No.	Height (Cm)	Weight (Kg)	Sr.No.	Height (Cm)	Weight (Kg)
1.	100	15.0	22.	107	18.0
2.	106	16.0	23.	124	20.0
3.	107	18.0	24.	115	20.5
4.	102	15.0	25.	118	17.0
5.	110	18.5	26.	118	21.5
6.	109	16.5	27.	127	20.5
7.	110	17.5	28.	118	18.0
8.	107	17.5	29.	120	18.5
9.	110	17.5	30.	125	18.0
10.	108	18.0	31.	127	21.0
11.	123	20.0	32.	127	21.0
12.	109	17.0	33.	119	17.5
13.	124	19.5	34.	120	18.0
14.	114	18.0	35.	118	17.5
15.	112	19.5	36.	122	25.0
16.	127	20.0	37.	116	26.0
17.	122	19.5	38.	131	25.5
18.	108	18.0	39.	122	23.0
19.	125	19.5	40.	125	24.0
20.	118	17.5	41.	122	23.0
21.	110	18.5	42.	122	22.0

Sr.No.	Height (Cm)	Weight (Kg)	Sr.No.	Height (Cm)	Weight (Kg)
43.	125	25.0	68	132	23.0
44.	135	25.5	69	123	22.0
45.	127	23.0	70	131	22.0
46.	124	21.5	71	147	36.5
47.	136	25.0	72	134	32.0
48.	123	22.5	73	147	36.0
49.	121	21.5	74	145	38.0
50.	118	20.0	75	144	36.0
51.	117	19.5	76	142	35.0
52.	118	21.5	77	146	38.0
53.	119	21.0	78	134	35.0
54.	122	21.0	79	143	40.0
55.	117	20.0	80	128	25.0
56.	125	19.5	81	129	25.5
57.	118	20.5	82	136	36.0
58.	120	21.0	83	133	35.0
59.	119	20.5	84	145	37.0
60.	121	21.0	85	147	37.5
61.	120	20.0	86	145	30.0
62.	132	23.0	87	146	36.0
63.	132	23.0	88	145	35.5
64.	132	22.5	89	140	38.0
65.	132	22.0	90	145	30.0
66.	133	27.0	91	148	32.5
67.	127	21.0	92	147	32.0

Sr.No.	Height (cm.)	Weight (Kg)	Sr.No.	Height (cm)	Weight (Kg)
93.	146	32.0	17.	112	20.0
94.	147	33.5	18.	109	19.0
95.	146	40.0	19.	131	23.0
96.	146	42.0	20.	119	18.0
97.	162	48.0	21.	119	18.5
98.	155	43.0	22.	118	17.0
99.	153	40.0	23.	115	17.5
100.	155	40.0	24.	117	16.0
101.	<u>Middle SES</u>		25.	144	17.0
1.	116	15.0	26.	120	20.0
2.	118	16.0	27.	115	28.5
3.	116	17.5	28.	112	16.5
4.	107	16.0	29.	107	18.0
5.	111	17.5	30.	126	27.0
6.	118	18.5	31.	122	28.0
7.	118	18.5	32.	129	30.0
8.	116	16.5	33.	130	23.0
9.	108	15.0	34.	125	29.0
10.	107	15.0	35.	112	17.0
11.	123	25.0	36.	138	28.5
12.	126	25.5	37.	116	23.5
13.	115	20.5	38.	123	23.0
14.	108	18.0	39.	139	28.0
15.	110	18.0	40.	139	28.0
16.	107	18.5	41.	129	21.0
			42.	140	30.0

Sr.No.	Height (Cm.)	Weight (Kg)	Sr.No.	Height (Cm)	Weight (Kg)
43.	120	20.0	68.	144	28.0
44.	138	27.5	69.	137	25.0
45.	138	30.5	70.	136	27.0
46.	125	23.5	71.	140	25.0
47.	120	21.5	72.	152	39.0
48.	137	29.0	73.	148	38.5
49.	135	25.0	74.	155	45.0
50.	137	22.0	75.	137	26.0
51.	140	32.5	76.	138	28.0
52.	140	31.0	77.	138	26.5
53.	138	25.0	78.	141	31.0
54.	128	23.0	79.	155	42.0
55.	136	24.0	80.	133	41.0
56.	137	24.5	81.	155	37.0
57.	126	25.0	82.	152	40.0
58.	148	28.0	83.	163	39.0
59.	132	28.0	84.	151	40.0
60.	139	25.0	85.	148	40.0
61.	141	30.0	86.	148	38.0
62.	139	29.0	87.	152	40.0
63.	134	25.0	88.	159	45.0
64.	141	27.5	89.	154	42.0
65.	140	28.0	90.	143	35.0
66.	133	26.5	91.	151	38.0
67.	140	29.0	92.	149	38.0

Sr.No.	Height (Cm)	Weight (Kg)
93.	150	44.0
94.	152	39.5
95.	157	41.5
96.	156	41.0
97.	158	43.0
98.	159	41.0
99.	156	40.0
100.	148	40.0

ANNEXURE IV

Percentages of Standard height, Weight and weight/
height of Rural Girls.

Sr.No.	Height /Age.	Height/Age	Weight/Height
1	68.18	82.64	82.50
2	72.72	87.60	83.01
3	81.81	88.42	92.52
4	68.18	84.29	80.88
5	84.09	90.90	92.50
6	75.00	90.08	83.25
7	79.54	90.90	87.49
8	79.54	88.42	89.95
9	79.54	90.90	87.49
10	72.00	85.03	84.66
11	80.00	96.85	82.60
12	68.00	85.82	79.22
13	78.00	97.63	79.88
14	72.00	89.76	80.21
15	78.00	88.18	88.44
16	80.00	100.00	79.99
17	78.00	96.06	81.19
18	72.00	85.00	84.66
19	75.00	98.42	79.24
20	70.00	92.91	75.33
21	74.00	86.61	85.43
22	72.00	84.25	85.45

Sr.No.	Weight/Age	Height/Age	Weight/Height
23	80.00	97.63	81.93
24	82.00	90.55	90.55
25	60.71	89.39	67.85
26	76.73	89.39	85.81
27	73.21	96.21	76.02
28	64.28	89.39	71.84
29	66.07	90.90	72.61
30	64.28	94.26	67.82
31	75.00	96.21	77.88
32	75.00	96.21	77.88
33	70.00	90.15	69.26
34	64.28	90.90	70.65
35	70.00	89.39	69.85
36	75.75	88.40	85.65
37	78.78	84.05	93.63
38	77.27	94.92	81.36
39	69.69	88.40	78.80
40	72.72	90.57	80.25
41	69.69	88.40	76.91
42	66.66	88.40	75.37
43	75.75	90.57	83.60
44	77.27	97.82	78.95
45	69.69	92.02	75.70
46	65.15	89.85	72.47
47	75.75	98.55	76.83

Sr.No.	Weight/Age	Height/Age	Weight/Height
48	68.18	89.13	76.46
49	58.10	86.02	69.11
50	54.05	81.94	65.93
51	52.70	81.25	64.83
52	58.10	81.94	70.87
53	56.75	82.63	68.87
54	56.75	84.72	68.64
55	54.05	81.25	66.95
56	52.70	86.80	66.49
57	55.40	81.94	67.07
58	56.75	81.33	67.01
59	55.40	82.63	62.65
60	50.00	79.60	60.16
61	47.61	78.94	62.90
62	54.76	86.84	62.90
63	54.76	86.84	61.53
64	53.77	86.84	57.96
65	52.38	86.84	73.28
66	64.28	87.50	59.69
67	50.00	83.55	62.90
68	54.76	86.84	64.56
69	52.38	80.92	60.62
70.	52.38	86.18	84.67
71.	79.34	93.63	81.43
72	69.56	85.35	83.61
73	78.26	93.13	89.36

Sr.No.	Height/Age	Height/Age	Height/Height
74	82.26	92.35	85.25
75	78.26	91.35	84.04
76	76.08	91.71	88.75
77	82.60	91.08	89.06
78	76.08	92.99	75.38
79	86.95	85.35	66.60
80	54.34	91.08	67.40
81	55.43	81.52	90.26
82	78.26	86.62	89.73
83	76.08	84.71	87.01
84	80.43	92.35	87.01
85	80.43	93.63	86.98
86	65.21	92.35	70.55
87	78.26	92.99	84.08
88	77.17	92.35	83.48
89	82.60	89.17	92.55
90	60.00	90.62	66.20
91	65.00	92.50	70.27
92	64.00	91.87	69.65
93	64.00	91.25	70.13
94	67.00	91.81	72.92
95	74.07	90.12	86.30
96	77.77	90.12	86.30
97	88.88	100.00	88.88
98	79.62	95.67	83.22
99	74.07	94.44	78.43
100	74.07	95.67	77.41

Middle SES

Sr.No.	Weight/Age	Height/Age	Weight/Height
101	71.42	95.86	71.17
102	76.19	97.52	74.57
103	83.33	95.86	82.97
104	76.19	88.42	82.24
105	83.33	91.73	86.71
106	88.09	90.90	92.49
107	88.09	97.52	86.22
108	78.57	95.86	78.28
109	71.42	89.25	76.38
110	71.42	88.42	77.10
111	100.00	100.00	99.99
112	102.00	99.21	102.80
113	82.00	90.55	90.55
114	72.00	85.03	84.66
115	72.00	86.51	83.12
116	74.00	84.25	87.83
117	80.00	88.18	90.71
118	76.00	85.82	88.55
119	92.00	103.14	89.19
120	69.23	90.15	71.24
121	69.23	90.15	73.22
122	60.71	90.15	67.28
123	62.50	85.60	72.94
124	57.14	88.63	64.41

Sr.No.	Weight/Age	Height/Age	Weight/Height
125	60.71	109.09	55.60
126	71.42	90.90	78.49
127	101.78	87.12	116.72
128	58.92	84.84	69.38
129	64.28	81.06	79.23
130	96.42	95.45	100.92
131	100.00	92.42	108.09
132	107.44	97.72	109.53
133	82.14	98.48	83.33
134	103.57	94.69	109.27
135	60.71	84.84	71.49
136	86.36	100.00	86.32
137	71.21	84.05	84.68
138	69.69	89.13	76.68
139	84.84	100.72	95.15
140	84.84	100.72	66.04
141	63.63	93.47	89.57
142	90.90	101.44	89.66
143	60.60	86.95	83.29
144	83.33	100.00	92.38
145	92.42	100.00	78.58
146	71.21	90.57	74.89
147	65.15	86.95	82.34
148	78.37	90.13	82.32
149	67.56	93.75	72.00
150	59.45	95.43	90.30

Sr.No.	Weight/Age	Height/Age	Weight/Height
151	87.85	97.22	90.30
152	83.78	97.22	86.13
153	67.56	95.83	70.47
154	62.16	88.88	69.89
155	57.14	89.47	67.70
156	58.33	90.13	64.55
157	59.52	52.89	71.62
158	66.66	97.36	66.29
159	66.66	86.84	76.57
160	59.52	90.44	64.92
161	71.42	92.76	76.80
162	69.04	91.44	75.35
163	59.52	88.15	67.31
164	65.47	92.76	70.40
165	66.66	92.10	72.20
166	63.09	85.69	71.92
167	69.04	92.10	74.77
168	66.66	94.73	70.19
169	59.52	90.13	65.87
170	64.28	89.47	71.66
171	54.34	89.17	60.89
172	84.78	96.81	87.49
173	83.69	94.26	88.70
174	97.82	98.72	98.99
175	56.52	87.26	64.71
176	60.86	87.89	69.18

Sr.No.	Weight/Age	Height/Age	Weight/Height
177	57.60	87.89	65.48
178	62.00	88.12	70.35
179	84.00	96.87	86.70
180	82.00	83.12	98.64
181	74.00	96.87	76.38
182	80.00	95.60	84.21
183	78.00	101.87	76.56
184	80.00	94.37	84.76
185	80.00	92.50	86.48
186	76.00	92.50	82.16
187	80.00	99.37	84.21
188	90.00	96.25	90.56
189	84.00	88.27	87.27
190	64.31	88.27	73.42
191	70.37	93.20	75.49
192	74.07	92.99	76.51
193	73.14	93.82	77.96
194	76.85	96.91	79.29
195	75.92	96.29	78.84
196	79.62	97.53	81.64
197	75.92	98.14	77.35
198	75.07	96.29	79.99
199	74.07	91.35	81.00
200	70.37	91.97	75.49

ANNEXURE V

Time-Spending pattern of both SES groups

Lowmiddle SES Vs middle SES

Activities	Age group and percentages of mean time		
	7-9 (years)	10-12 (years)	13-15 (years)
Personal needs/ care	4.31	-3.22	-2.28
Domestic work	-2.41	-0.10	11.76
Sibling care	-45.78	11.76	5.54
School work	-4.14	-1.41	-0.73
Farm work	0.83	3.95	2.27
Animal care	3.32	-2.96	-2.47
Collecting fuel/ cowdung	-5.40	11.09	1.90
Play/Recreation	-4.99	2.81	-0.57
Sleep/Rest	-0.80	0.44	-0.71

ANNEXURE VI

Correlation between reported and recorded (Investigator)
time-spending pattern of rural girls.

Low-middle SES group		
Activities	Cal. 'r'	Cal. 't'
1) Domestic activities	0.387	1.78
2) Sibling care	0.301	1.14
3) Play/recreation	0.233	1.01
4) Personal care	0.111	0.485
5) Rest and sleep	0.410	1.90
6) Collecting fuel/ cowdung	0.201	0.58
7) Farm work	0.410	1.91
8) School work	0.096	0.96
9) Animal work	0.290	1.28

Middle SES group		
Activities	Cal. 'r'	Cal. 't'
1) Domestic activities	0.273	1.27
2) Sibling care	0.280	1.05
3) Play/recreation	0.401	1.86
4) Personal care	0.079	0.33
5) Rest and sleep	0.120	0.51
6) Collecting fuel/ cowdung	0.200	0.35
7) Farm work	0.296	1.20
8) School work	0.182	0.92
9) Animal work	0.315	1.40

ANNEXURE VII

Calculated percentages of agreement for reported
(rural girls) and recorded (investigator)
activity pattern of rural girls.

7-9 Years

Low-middle SES	Middle SES
1) 95.77%	100%
2) 100%	95.77%
3) 96.10%	94.28%
4) 96%	100%
5) 95%	95.89%
6) 100%	100%

10-12 Years

Low-middle SES	Middle SES
1) 100%	95.77%
2) 96.10%	100%
3) 95.77%	100%
4) 100%	96.20%
5) 100%	100%
6) 96.10%	96.10%

13-15 Years		
Low-middle SES		Middle SES
1)	95.23%	100%
2)	100%	100%
3)	88.60%	96.10%
4)	94.73%	96.29%
5)	94.73%	100%
6)	95.77%	96.10%
7)	100%	100%
8)	96%	94.28%