# “EFFECT OF NUTRITIONAL HEALTH EDUCATION ON KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING ANEMIA AMONG SCHOOL GOING ADOLESCENT GIRLS OF BELGAUM TALUKA - A CONTROLLED TRIAL”

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## ENDORSEMENT BY HOD, PRINCIPAL

This is to certify that the dissertation entitled **"EFFECT OF NUTRITIONAL HEALTH EDUCATION ON KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING ANEMIA AMONG SCHOOL GOING ADOLESCENT GIRLS OF BELGAUM TALUKA - A CONTROLLED TRIAL"** is a bonafide research work done by **THE CANDIDATE REG NO. BJ0108005** in the Department of Obstetrics and Gynaecology, Jawaharlal Nehru Medical College, Nehru Nagar, Belgaum – 590 010.

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# LIST OF ABBREVIATIONS USED

| | | |
|---|---|---|
| CDC | - | Centre for Disease Control |
| GCC | - | Girls Gaining Ground Project |
| Hb | - | Haemoglobin |
| ICMR | - | Indian Council of Medical Research |
| IDA | - | Iron deficiency anaemia |
| IEC | - | Information Education Communitcation |
| IFA | - | Iron Folic acid |
| ITI | - | Intestinal parasitic infection |
| KAP | - | Knowledge attitude practice |
| MMR | - | Maternal mortality rate |
| WHO | - | World Health Organization |

# ABSTRACT

**Aims and objectives**

To assess the effect of nutritional health education on the knowledge, attitude and practice regarding anemia among school going adolescent girls.

**Study design:** A controlled trial.

**Study population:** Adolescent school going girls of VI and VII std of Belgaum.

**Sample size:** A sizeable sample of 500 students of VI and VII std of the six government schools.

**Methodology**

A written consent was taken from the Principal of the concerned schools. A predesigned and pretested questionnaire was used. This included baseline characteristics of the study population and questions related to anemia. In study group, initially a pretreatment Hb estimation was done by Sahli's method and predesigned and pretested questionnaire was distributed to the students. Deworming was done and iron tablets were given for two months to those students who were anemic. An educational talk with emphasis on nutrition and its impact on anemia was undertaken in the study group. In the control group the same protocol is followed except for the educational talk. After a period of two months, follow up was done for both the groups which included Hb estimation by Sahli's method and administration of the post test questionnaire.

**Results**

The mean hemoglobin values were significantly higher in the study group than in the control group. Students in both the groups were unaware of the definition of anemia during pre-testing session. Scores for nutritional knowledge and practices regarding anemia in the study group were significantly higher after

intervention when compared with the baseline where as the scores of the control group did not show significant improvement from baseline. Nutrition knowledge scores regarding basic knowledge of anemia, causes, symptoms and signs, iron rich food, prevention, treatment and complications of anemia were significantly higher in the study group than in the control group after eight weeks.

**Conclusion**

The awareness regarding various aspects of anemia amongst adolescent girls was observed to be poor during pre-testing, which could lead to adverse health consequences. Significant improvement in the knowledge, development of positive attitudes and healthy practices regarding anemia and its prevention was observed in the study group after imparting health education. Hence the school system can be used as a vehicle together with information, education and communication to bring about awareness regarding anemia and its consequences among the female adolescents, which is potentially the most nutritionally vulnerable segment of the population.

**Key Words**

Adolescent female; Anaemia; Health education; Nutrition;

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# INTRODUCTION

Adolescence is a period of life between 10-19 years as defined by World Health Organization (WHO) and adolescents constitute approximately 20% of the world population.[1]

Adolescence is a particularly unique period in life, because during this period there is intense physical, psychosocial, cognitive development and their nutritional status is vital for optimal attainment of all these changes. There is an increase nutritional demand as these adolescents gain up to 50% of their adult weight, more than 20% of their adult height and 50% of their adult skeletal mass.[2]

Adolescence is a vulnerable period in the human life cycle for the development of nutritional anemia. Anemia is estimated to be the greatest nutritional problem and in adolescents, it can have negative effects on their cognitive performance and growth .Girls are more likely to be a victim of it due to various reasons: in a family with limited resources, the female child is more likely to be neglected; she is deprived of good food, education, and is utilized as an extra working hand to carry out the household chores, besides there is an added burden of menstrual blood loss.[3]

If pregnancy occurs during adolescence, anemia can not only increase maternal morbidity and mortality, but also increase the incidence of poor birth outcomes in the infant (for example, low birth weight, and prematurity) and also negatively impact the infant's iron status.[4]

At all levels, the negative effects of anemia during adolescence justifies a public health action, because initiatives to prevent it commonly target infants, young children, pregnant and lactating women, but not necessarily adolescents. The needs of adolescents may remain unmet, and the consequences of anemia in adolescents continue. Iron status at the beginning of adolescence is important for ensuring adequate growth during this period, because iron deficiency can decrease appetite, which in turn will decrease the food and energy intake.[4]

The physiological growth spurt and menarche cause an increase in daily iron requirement, which, if not met, can rapidly result in anemia. Diagnosis and treatment of anemia is of particular importance in adolescent girls because they enter the reproductive cycle soon after menarche. Even a marginal iron deficiency at this stage can precipitate severe anemia later on due to the burden imposed by pregnancy and parturition.[5]

Poor eating habits lead to dietary deficiency of essential nutrients, variation in cultures, myths and taboos about food prevailing in different communities contribute to anemia. Faulty cooking practices will also reduce the bioavailability of the essential nutrients.[6]

In addition, an optimal current nutrition status of present adolescents will assure a healthy and productive future generation. The vicious cycle of malnutrition needs to be dismantled at necessary stages and adolescence is one such important life stage. Adolescence offers the last opportunity to intervene and recover the growth faltered in childhood and also support the growth spurt

and skeletal development to break this vicious cycle of inter-generational under nutrition.[7]

In developing countries, factors associated with undernutrition of adolescents are poor household economic condition, periodic food-shortage, childlabour (marker of household income-poverty), burden of disease, poor knowledge about long-term consequences of undernutrition of adolescents, quantity and quality of food, and access to health and nutrition services.[8]

Adolescent girls who are at the brink of womanhood constitute the most crucial segment of our population. A rapid growth rate combined with a marginal nutrient intake increases the risk of nutritional deficiencies in this population. Poor nutritional status during adolescent is an important determinant of health outcomes at a later stage of life. Therefore, attention should be given to adolescent health and nutrition.[9]

Dietary knowledge and access to resources are critical to improve health and nutrition in a sustainable way. Adolescence is the time to learn and adopt healthy habits to avoid many health and nutritional problems later in life. Adolescents have more easy access to health and nutrition information through schools, recreational activities, and mass media than they have later in their lives. Particularly, health and nutrition knowledge and healthy habits of female adolescents will have critical roles to play in maintaining future family health and nutrition. Increasing awareness, knowledge and correction of anemia in adolescent girls will go a long way in improving the health of future parents.[8]

Hence this study was undertaken to assess the effect of nutritional health education on knowledge, attitude, practices regarding anemia among adolescent school going girls as this contribution would certainly make a difference to the quality of life of adolescents with far reaching benefits in terms of safe mother hood and healthier future generations and would also help in designing and implementing future programmes targeted to improve the nutritional status of adolescent population in a more effective manner.

# OBJECTIVE

Objective of the present study was to assess the effect of nutritional health education on knowledge, attitude and practice regarding anaemia among school going adolescent girls.

# REVIEW OF LITERATURE

"Women's deprivation in terms of nutrition and health care rebounds on society in the form of ill-health of their offspring-males and females alike"- Siddiq Osmani and Amartya Sen.

Adolescence comes from the Latin word "adolescere" meaning to grow to maturity. It is the process of developing from childhood to adulthood, spanning the years between the onset of puberty and the attainment of maturity. This is the formative period of life when the maximum amount of physical, psychological, and behavioral changes take place.[3]

Adolescents are an important resource of our country. India has one of the fastest growing youth populations in the world and adolescent girls of age 13 to 19 years constitute nearly 66 million. The lives of these girls are characterized by limited education, lack of knowledge pertaining to social as well as health aspects and also limited influence on decisions affecting their lives. During this period, attitudes, beliefs and values tend to settle into a pattern, out of which emerges the shape and directions of one's life style.[10]

Overall adolescents throughout the world, more in developing countries and rural adolescent girls are at greater risk of anemia and its adverse consequences. The nutritional requirements of adolescent are influenced primarily by the normal event of puberty and simultaneous spurt of growth. Puberty is an intensely anabolic period with increase in height and weight, alteration in the body composition resulting from increased lean body mass and

change in the quantity and distribution of fat and enlargement of many organ systems.[11] Due to enhanced growth during adolescence, the requirement of some minerals is of paramount importance. A rapid growth rate combined with a marginal nutrient intake increases the risk of nutritional deficiencies in this population. Micronutrients such as iron and zinc are essential trace elements involved in the high growth rates of adolescents.[9]

A recent report from Asia shows that malnutrition reduces human productivity by 10% to 15% and gross domestic product by 5% to 10%.[12] By improving the nutrition of adolescent girls and women, nations can reduce health care costs, increase intellectual capacity, and improve adult productivity.[13]

During adolescence, anemia is estimated to be the greatest nutritional problem.[4] Adolescents are particularly susceptible to iron deficiency anemia in view of the increased need for dietary iron for hemoglobin and myoglobin synthesis during the rapid period of growth when blood volume and muscle mass are increasing. Nutritional anemia due to iron deficiency is the most prevalent nutritional problem in the world today. According to WHO, iron deficiency the most common anemia, as it is estimated to affect approximately two billion people worldwide. In developing countries this high rate has been related to insufficient iron intake, exacerbated by chronic intestinal blood losses due to parasitic and malarial infections[14.] Iron deficiency is not life threatening but it can have detrimental effect on work capacity, learning ability and resistance to disease. Once anemia results, there is also an impairment in cognitive performance and behavior, and in girls it further causes pregnancy complications.[11]

Iron is one nutrient that is in particularly high demand during adolescence.[4] The minimum daily dietary iron requirement during adolescence is 12 to 15 mg/day. The peak requirement for absorbed iron in girls reaches a maximum of approximately 1.5 mg/day during puberty and remains at about 1.3 mg/day after puberty to replace menstrual blood loss. [15]Iron is present in all body cells and is fundamental for basic physiological processes such as hemoglobin production and enzyme function. Iron deficiency generally results when dietary iron intake cannot meet the required needs and iron reserves in the body are depleted in order to support the bodies physiological demands. The body needs more iron when it is growing rapidly and when frequent blood loss occurs during menstruation, thus adolescent girls are at particularly high risk of developing iron deficiency anemia. This is especially true for some adolescent girls who experience heavy blood loss during menstruation.

Prevention of iron deficiency is essential, as iron deficiency similar to other micronutrient deficiencies, is generally not outwardly apparent, even though it may already be negatively affecting fundamental physiological processes. In its most advanced stage, when iron reserves have been depleted, anemia develops.[4] The deficiency gets further aggravated by not eating high-iron containing foods as well as poor bioavailability of iron due to peculiarity of food habits. In early stages of iron deficiency, iron stores can be depleted without overt anemia, but any further loss, precipitates anemia. [15]

Intestinal parasites are estimated to affect more than a third of the world's population, with the highest rates among children five to fifteen years of age, among whom intestinal worms represent the single largest contributor to the

disease. Of the intestinal helminths, hookworm in particular (Necator. Americanus and Ankylostoma. duodenale) negatively affects iron status by causing damage to the intestinal mucosa leading to intestinal bleeding and further iron loss. In addition to greater loss of iron, hookworm infection is also associated with the malabsorption of all nutrients including iron, and appetite inhibition, both of which may contribute to further deterioration of the nutritional status. In areas where intestinal helminths are common, deworming medicine should be provided once or twice yearly to the at-risk populations. [4]

Worm infestation influence anemia to a large extent and hence calls for a dowering campaign along with IFA distribution in control programme for anemia in adolescents.

Worm infestation was found to be a strong predictor of anemia and was cause of 25% of all anemia, 35% of iron deficiency anemia and 73% of severe anemia was attributable to hookworm infection.[16]

A higher prevalence of anemia too can be a major cause of delayed menarche. It was also studied that high menstrual blood loss was associated with increased risk of anemia. This further reiterates and emphasizes the need for corrective measures for anemia and iron deficiency in girls before they enter adolescence so as to compensate for the additional requirements for growth & development during puberty and combat the extra losses during menstruation in girls who had attained menarche.[14]

The approximate age at menarche was found to be between 13 to 14, thus higher prevalence of anemia in age group more than 14 years seems to be due to excessive menstrual loss.[17]

Efforts to change dietary practices away from those that result in a reduced absorption of iron from foods consumed (for example, drinking tea or coffee with meals and towards those that will increase iron absorption (for example, fermenting and germinating selected cereals) could prove to be a promising approach. However, dietary behaviors are usually influenced strongly by cultural and environmental factors and thus are difficult to change in sustainable ways.[18]

Association observed between the habit of taking tea/coffee after meals and anemia is due to the interference of the dietary bioavailability of iron by the tannin contents of tea/coffee. [19]

Studies conducted in various part of the country showed the prevalence of anemia of 59.85%, 44.8%, 34.5%, 25.9%, 23.9% in Wardha, Tamilnadu, Meerut, Varanasi, Chandigarh, among adolescent girls respectively.[20,21,22,23,24]

WHO Global Data Base on anemia in Karnataka showed a prevalence of anemia among adolescent girls to be around 50.7%.[25]

The awareness regarding anemia and appropriate diet is extremely poor in adolescents; this is made worse by the lucrative promotional campaigns of various junk foods. An assessment of nutritional status of adolescents in India revealed that almost half adolescents of both sexes consume inadequate iron and

proteins in their diet. A multi-center study carried out by ICMR in 16 districts in from 11 states showed on overall prevalence of anemia of 90.1%.[15] In order to reduce the prevalence of anemia in adolescent girls, there is an absolute need for strengthening the awareness programmes.

Anemia is the late manifestation of deficiency of nutrient(s) needed for hemoglobin synthesis and such deficient states are associated with adverse health consequences. There is a general agreement that many adolescent girls in India need iron supplementation, which in turn will improve pre-pregnancy hemoglobin status and iron stores. Possibly, it may be easier to build their iron and folate reserves by supplementation / dietary diversification and education through schools.[26]

Adolescent girls need access to information and services related to nutrition, reproductive and sexual health. Programs can reach girls through a variety of avenues, including schools, workplaces, marriage registration systems, and youth-oriented health programs. Schools can be a key part of helping adolescent girls become healthy adults: Research shows that promoting female education and literacy can improve nutritional status and encourage females to seek regular health care.[27] Ensuring that adolescent girls receive enough food, iron and folate supplements, and iron and iodine-fortified foods, as well as helping them delay their first pregnancy and protect themselves from sexually transmitted infections and other diseases, can help girls become healthy women. Teaching girls to use their knowledge of nutrition when preparing and handling food can also improve their health and that of their families.[28]

In communities where many adolescent girls are underweight, nutritional supplements may improve the girl's overall health and their pregnancy outcomes, including reducing their risk of bearing low birth-weight babies. In India and Egypt, for example, where iron supplements have been given in schools, the prevalence of anemia has fallen significantly.[29] Interventions that reach adolescents help establish healthy habits that continue into adulthood. Such programs should also involve males, boys who receive information about women's increased nutritional requirements during pregnancy and lactation may be better partners when they form families.[30]

Public health programmes through schools and welfare centres are better approaches for combating anemia in adolescent girls of poor communities especially in developing countries like India.[31]

A pilot programme conducted in Vadodara district of Gujarat covering over 69000 girls in over 426 schools, the study included IFA supplementation and also assessment of knowledge and practices of the adolescent girls with reference to their dietary habits and package of intervention included nutrition education through schools by providing information and education material prepared by the government. The baseline study had shown around 75 percent anemia prevalence, which was similar in all the three areas. Level of serum ferritin was also low after 17 months of intervention. Impact evaluation showed reduction in anemia prevalence by 21.5% that is, from 74.7% to 53.2% ($p<0.05$). Further improvement in Hb was recorded among 80 per cent girls. Supervised, once a week IFA supplementation to adolescent girls through institutions specially, schools was found to be an effective intervention to reduce anaemia

and was scalable within the system. The experience to educate the girls on dietary behavior has not been satisfactory and covering all out of school girls is still a challenge to the success of anemia control.[32]

A cross sectional study was carried out to determine the factors affecting knowledge, attitude and practice of secondary school girls concerning iron deficiency anemia, in Quazvin city. The study population consists of 218 Students who were randomly selected from ten secondary schools in a selected area. A questionnaire was prepared to collect the data and statistical tests of X2 and regression were employed to analyse the data. The results of the study indicated that 57.3% of students had poor knowledge, 54.1% unfavorable attitude and 44.5% weak practice on iron deficiency anemia. There is significant relationship between knowledge and attitudes. It was found that knowledge had significant relationship with practice.[33]

A study conducted in Cairo, to assess the nutritional knowledge and attitude between private and government adolescent school girls, regarding anemia showed that government school girls had better knowledge about iron sources and impact of iron deficiency (63.5% and 54.2%) compared to private school girls (63% and 51.4%). Significant difference was clear between knowledge of girls from both schools concerning iron function (28.6% in governmental school girls and 40.4% in private schools).[34]

Educational interventions can help change the attitudes of people for their betterment. Since adolescence is a period of rapid personal, physical and intellectual development and the effects of poverty, illiteracy as well as lack of

nutritional and health care are further magnified by gender discrimination, girls of this age group need to be addressed as a special target category by development programmes. They need to be given an education that would raise their self confidence and decision making skills.[35]

An interventional study was conducted in India, in order to see the awareness of adolescent girls in relation to health and nutritional deficiencies like anemia and also to see the effect of educational intervention on their knowledge levels. It was seen that although knowledge of nutrients increased during post testing, but less number of girls were aware about nutritional deficiency diseases. Knowledge about anemia among girls was 12.5% during pre-test and then increased to 25.8% after post test intervention Thus it can be concluded from the above study that educational intervention, if given in the right manner, can bring out positive changes in its true sense and can modify or change the lives of people. This holds true more for the younger population as they are the future men and women who would promote growth and development of our nation.[12]

A study conducted in Chandigarh to assess the effect of health education on the KAP of women for prevention of anemia in a village of Chandigarh. Socio-economic and demographic characteristics of both the intervention and control groups were similar. All women in the intervention group could specify at least one correct cause of anemia and identified a sign or symptom of anemia, whereas, 73.3% and 46.6% women in the control group did not know the cause and signs and symptoms of anemia respectively ($p<0.001$). The knowledge about methods of anemia prevention was significantly higher in intervention group compared to control group ($p<0.001$). In intervention group, 93% women were in

favour of including green leafy vegetables in their diet compared to 67% in control group ($p<0.01$). Higher proportions of women in intervention group were taking green leafy vegetables and iron tablets than control group but the differences were not statistically significant. There was significant change in the knowledge and attitude of women who received health education. Hence it was concluded that a co-ordinated communication strategy is required to improve anemia prevention practices in the community.[36]

Another study was conducted in the registered slums under India Population Project-VIII, MCH, located in twin cities of Hyderabad and Secunderabad, Andhra Pradesh - India. Girls between 10 and 19 years of age were covered in the study to assess the nutritional status and dietary intake of adolescent girls and to study the impact of IEC programme on their nutritional knowledge and practices. After collection of the baseline data, IEC intervention was carried out for six months and its impact was studied. . Iron deficiency anemia was found to be the most common nutritional problem observed in them. About 88% of subjects were anemic using WHO classification. Mild, moderate and severe anemia was observed in 49.0%, 31.3% and 7.9% of respondents respectively. Only 12.0% of respondents were found to be having normal haemoglobin levels of >12 g/dl. After IEC intervention significant proportion of girls could correctly identify the foods rich in various important nutrients. A marked increase in the intake of finger millet or Ragi was observed, which is a very rich source of calcium as well as iron. The IEC intervention resulted in improvement of nutritional knowledge of adolescent girls as well as behavioural pattern as envisaged by better cooking methods and an increase in the

consumption of nutrient rich foods. Though they were not aware earlier, after IEC intervention, 77.6% of girls could correctly identify the foods rich in iron, 55.2% could recall calcium rich foods and 62% could list the energy and protein rich recipes/food articles. Following IEC intervention, the knowledge about physical changes improved significantly. About 70% of the subjects for the first time received information on growth and development during IEC intervention. The IEC intervention, therefore, brought about significant improvement not only in the nutritional knowledge of adolescent girls but also translated some of them into action.[37]

A study conducted in Bangladesh to estimate the levels and differentials in nutritional status and dietary intake and relevant knowledge of adolescent girls. 64% of the girls were aware of the need to take extra nutrients during adolescence to attain growth spurt. Factors positively associated with knowledge were age, education, and access to mass media.

In a participatory nutrition education intervention study in Pune to improve dietary behaviors and iron status, to reduce prevalence of iron deficiency anemia of adolescent girls. The intervention focused on providing nutrition education and changing social norms. Changes in dietary behavior in study and control group were increased from 2.9% to 27.7% and 5.8% to 3.5% respectively.[38]

Girls Gaining Ground (GGG) project initiated by Bhavishya Alliance in 2005 in Maharashtra in adolescent girls showed significant change in knowledge about Hb levels, symptoms of anemia,(20% to 53%), prevention of anemia and

iron folic acid tablet consumption (8% to 18%), knowledge regarding iron- rich food items (74.8% to 83%) as compared to the baseline.[39]

A study to assess education and improved iron intakes for treatment of mild iron deficiency anemia in adolescent girls of age 12 to 17 years in southern Benin showed that after 4 weeks of nutrition education combined with an increase in the content and bioavailability of dietary iron for 22 weeks was implemented in the intervention school, but not in the control school. A nutrition knowledge questionnaire, 24-h dietary recalls, anthropometric measurements, iron status indices and screening for malarial and intestinal parasitic infections (IPI) were obtained in both groups Nutrition knowledge scores and mean intakes of nutrients including dietary iron, absorbable iron and vitamin C were higher in the intervention group ($p<0.05$) compared to the control group after 26 weeks. Also, mean hemoglobin and serum ferritin values were higher (122 vs. 113g/L; $p=0.0002$; 32 vs. 19µg/L; $p=0.04$) in the intervention group, whereas the incidence of anemia (32% vs 85%; $p=0.005$) and IDA (26 vs. 56%; $p=0.04$) was significantly lower. A multi-dietary strategy aiming to improve available dietary iron can reduce iron deficiency anemia.[40]

An interventional study to assess the effect of nutrition education on hematologic indices, iron status, nutritional knowledge, and nutritional practices of high-school girls was carried in Iran where the education group received instruction in face-to-face sessions, group discussions, and pamphlets for two months. The control group did not receive any information during the study. Hematologic tests, corpuscular indices, and serum ferritin levels were measured at baseline and after two months. Food-frequency questionnaires were

administered and histories taken, clinical signs of nutritional deficiencies observed, anthropometric measurements taken, nutritional knowledge tested, practices determined, and lifestyle questionnaires administered to all subjects. . Scores for nutritional knowledge and practices of the education group were significantly higher after two months compared with the baseline (31.4±6 vs. 24.3±5.9 points, $p<0.001$, and 31.2±5 vs. 28.4±5.7 points, $p<0.05$, respectively). The scores in the control group showed no significant changes from baseline to two months. These findings indicate that nutritional education can improve knowledge regarding healthy nutrition and lifestyle choices. Focused nutritional education using available resources and correcting current dietary habits in a vulnerable group of young women may result in dietary changes that can ultimately improve iron intake.[41]

A study was initiated earlier (2001-2002) with UNICEF support in two randomly chosen mandals of Medak district, Andhra Pradesh, to examine the feasibility and acceptability of weekly IFA supplementation to adolescent girls, using school system as a vehicle for anemia reduction. The project was evaluated at mid-term and at the endline. There were 1,881 girls enrolled in the six to ten classes. About 1,555 subjects, accounting for 82.7% of total, were covered under the study in baseline survey. Also, data pertaining to knowledge, attitude and practices (KAP), nutritional status (height and weight) and blood samples for estimation of blood haemoglobin levels were collected. During endline survey, 78.1% of the subjects could list all the signs and symptoms of anaemia and 89.6% could also recall the normal haemoglobin level to be maintained.[42]

Hence we can assume that nutrition education is an important measure to improve dietary habits and food choices of the adolescent girls, as poor dietary habits and ignorance are the main reason for nutritional status of the adolescent girls.

Adolescents can often be reached through educational and social activities. The existing settings such as health facilities can offer opportunities to integrate nutritional education into actual activities to reduce anemia.

So these education programmes integrate nutrition messages into health promotion components of safe motherhood which typically focus in improving self image and self-worth of adolescents.

# METHODOLOGY

The present study on adolescent school girls of VI$^{th}$ and VII$^{th}$ standard studying in six government schools of Belgaum Taluka was conducted from January 2009 to December 2009.

**Study design**

A controlled Trial.

**Setting**

This study included adolescent school girls of VI$^{th}$ and VII$^{th}$ standard studying in six government schools of Belgaum Taluka.

**Study period and duration**

The present study was conducted during the period of January 2009 to December 2009.

**Source of data**

Adolescent school girls of VI$^{th}$ and VII$^{th}$ standard studying in six government schools of Belgaum Taluka.

**Sample size**

A sizeable sample of 500 students of VI$^{th}$ and VII$^{th}$ standard of all the six government schools were included in the study.

**Selection Criteria**

***Inclusion criteria***

- Adolescent school girls of VI$^{th}$ and VII$^{th}$ standard of six government schools of Belgaum taluka.

***Exclusion criteria***

- Those school girls who were not willing to participate in the study.

**Method**

The study was approved by the Ethical and Research Committee of Ethics Committee, Jawaharlal Nehru Medical College, Belgaum. Six government schools of Belgaum, three schools from urban area and three schools from rural area were randomized into study and control group by using lottery method .In study group there were two rural schools and one urban school was included and in the control group two urban schools and one rural school was included.

Waiver of participants consent was obtained from the Institutional Ethics Committee, as most of the participants were minors. A written consent was taken from the Principal of the concerned schools (Annexure–I).

A predesigned and pretested questionnaire was used (Annexure II). This included baseline characteristics of the study population and questions which were formulated to know the definition of anemia, the basics of anemia like the terminologies hemoglobin, cause of anemia, prevention and treatment and the various simple day to day practices which can be followed to prevent anemia.

Awareness about anemia and its consequences and its complications if not corrected on time in adolescent girls.

In study group, initially a pretreatment Hb estimation was done by Sahli's method and predesigned and pretested questionnaire was distributed to the students. Deworming and iron tablets for two months were given to those students who were anemic. An educational talk with emphasis on nutrition and its impact on anemia was undertaken in the study group. The educational talk consisted of definition of anemia, explanation about iron metabolism and Hb synthesis, the causes, symptoms and signs, importance of iron rich food, prevention and treatment of anemia and its complications if not corrected on time.

In the control group the same protocol was followed except for the educational talk.

After a period of two months, follow up was done for both groups which included Hb estimation by Sahli's method and administration of the post questionnaire.

The socio-economic status of both the groups was analyzed using modified B.G Prasad's classification.

**Modified B. G. Prasad Classification**

| **Socioeconomic class** | **Prasad's classification 1961 per capital income in Rs./ Month**[43] | **Modified Prasad's classification in the study period 2009. Per capital per month income (Rs.)**[44] |
|---|---|---|
| I | 100 & above | 3600 & Above |
| II | 50 – 99 | 1800 & 3599 |
| III | 30 –49 | 1080 & 1799 |
| IV | 15 – 29 | 540 & 1079 |
| V | below 15 | <540 |

Average consumer price index[44] for the year 2009 = 727

Modification was done with the aid of Multiplication Factor (M.F), which was obtained as below:

$$\text{M. F.} = \frac{\text{Average Consumer price index for study period}}{100} \text{ X } 4.93$$

$$= 727/100 \times 4.93 = 35.8$$

After the results were obtained, a scoring system was developed to assess change in increase of knowledge in both pre and post test performance of the study and control group.

Correct answers were given score=1, wrong answer were given a score = -1, don't know answers were given score of= 0

**Statistical analysis**

Non parametric test to assess the knowledge of the participants before and after the intervention was done by using Wilcoxon's signed ranking test and SPSS 9.1 software was used to analyse the data.

Effectiveness of the programme was assessed;

- Comparing the results of pre and post test score in study group.
- Comparing the results of pre and post test score in control group

The comparison between the groups control versus study was done by Mann Whitney U test.

# RESULTS

**Table 1. Study population**

| Total | Control | Study |
|---|---|---|
| 500 | 250 | 250 |

The study included 500 adolescent school girls of Belgaum, out of which 250 were in control group and 250 were in study group.

**Table 2. Age Distribution of Girls**

| Age (Yrs) | Control | Study |
|---|---|---|
| 11 | 76 | 48 |
| 12 | 138 | 168 |
| 13 | 36 | 33 |
| 14 | 00 | 01 |

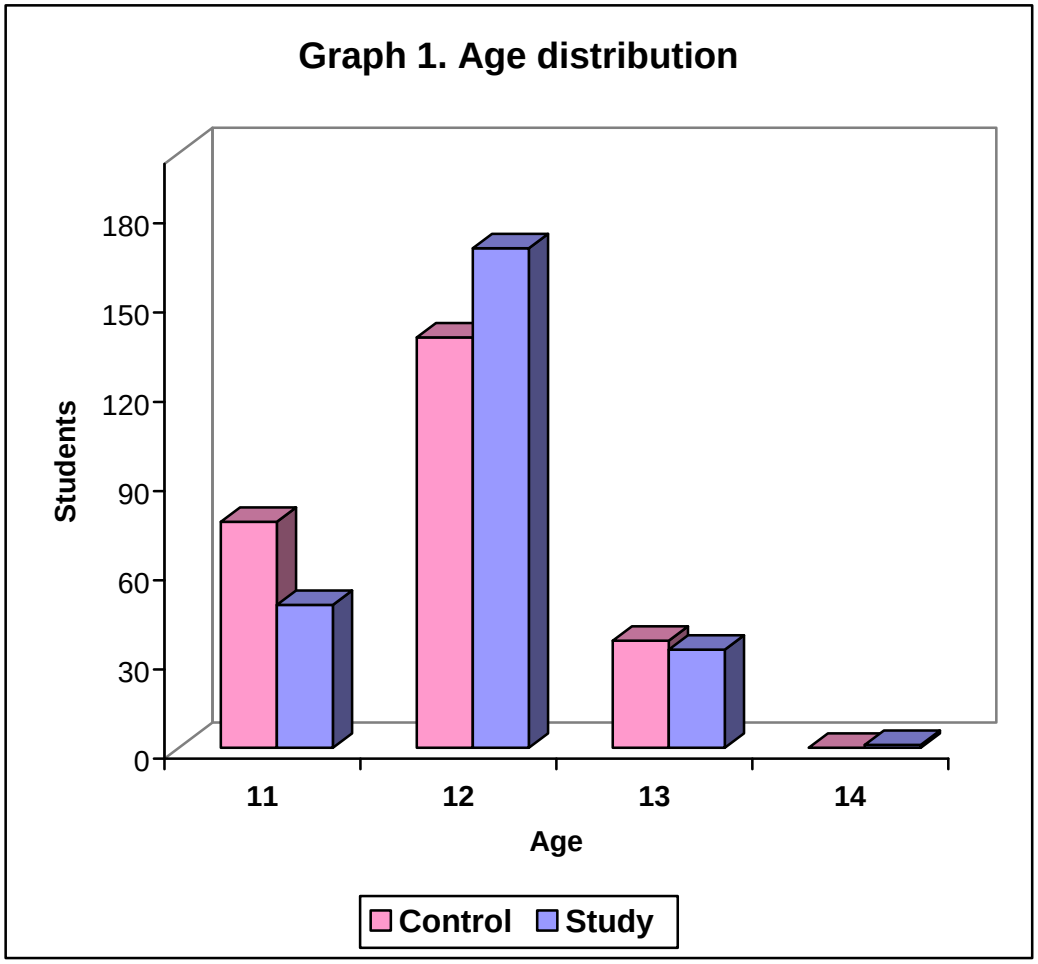



Table 2 shows the age distribution in the 2 groups studied. The mean age of adolescents in both the groups was 12years so the 2 groups were comparable.

**Table 3. Mean height, weight and BMI in the two study groups**

| Group | Mean height (meters) | Mean weight (kg) | BMI Kg/m2 |
|---|---|---|---|
| Study | 1.45 | 37.9 | 18.04 |
| Control | 1.45 | 37.8 | 18.00 |

The average height in the control group was 1.47 meters and average weight was 37.9 kg; whereas in the study group the average height was 1.47 meters and average weight was 37.8 kg respectively. The BMI in both the groups were same.

**Table 4**. **Attainment of menarche**

| Attainment of menarche | Study group | | Control group | |
|---|---|---|---|---|
| | Number | Percentage | Number | Percentage |
| Attained | 77 | 30.8% | 79 | 31.6% |
| Not – attained | 173 | 69.2% | 171 | 68.4% |
| Total | 250 | 100% | 250 | 100% |

Majority of girls (69.2%) in study group and (68.4%) control group had not attained menarche.

**Table 5. Socio-economic status of the study and control group**

| Socio economic class | Study group | | Control group | |
|---|---|---|---|---|
| | **Number** | **Percentage** | **Number** | **Percentage** |
| I | 00 | 00% | 3 | 1.2% |
| II | 00 | 00% | 5 | 2% |
| III | 78 | 31.20% | 83 | 33.20% |
| IV | 57 | 22.80% | 94 | 37.60% |
| V | 115 | 46.00% | 65 | 26% |
| **Total** | **250** | **100%** | **250** | **100%** |

In study group 46% of students were from class V, 31.2% from class IV, 22.8% from class II. In the control group 37.6% from class IV, 33.2% from class III, 26% from class V, 2% from class II, 1.2% from class I. This was statistically significant with Chi square= 31.11, DF=3, $p<0.001$.

**Table 6. Dietary pattern**

| Diet | Study group | | Control group | |
|---|---|---|---|---|
| | **Number** | **Percentage** | **Number** | **Percentage** |
| Vegetarian | 131 | 52.4% | 96 | 38.4% |
| Non Vegetarian | 119 | 47.6% | 154 | 61.2% |
| **Total** | 250 | 100% | 250 | 100% |

Majority of girls (52.4%) in study group and 47.2% in control group were vegetarian.

**Table 7. History of passing worm infestation**

| | **Study group** | | **Control group** | |
|---|---|---|---|---|
| | **Number** | **Percentage** | **Number** | **Percentage** |
| Yes | 45 | 18% | 34 | 13.6% |
| No | 205 | 82% | 216 | 86.4% |
| **Total** | 250 | 100% | 250 | 100% |

Majority of girls (82%) in study group and (86.4%) of girls in control group gave no history of passing worms. This was statistically not significant with Chi square= 1.819, DF=1, p<0.177

**Table 8. Mean Haemoglobin percentage of study group students**

| | **Before** | **After** |
|---|---|---|
| Mean Hb Percentage (gm%) | 9.10 | 10.40 |

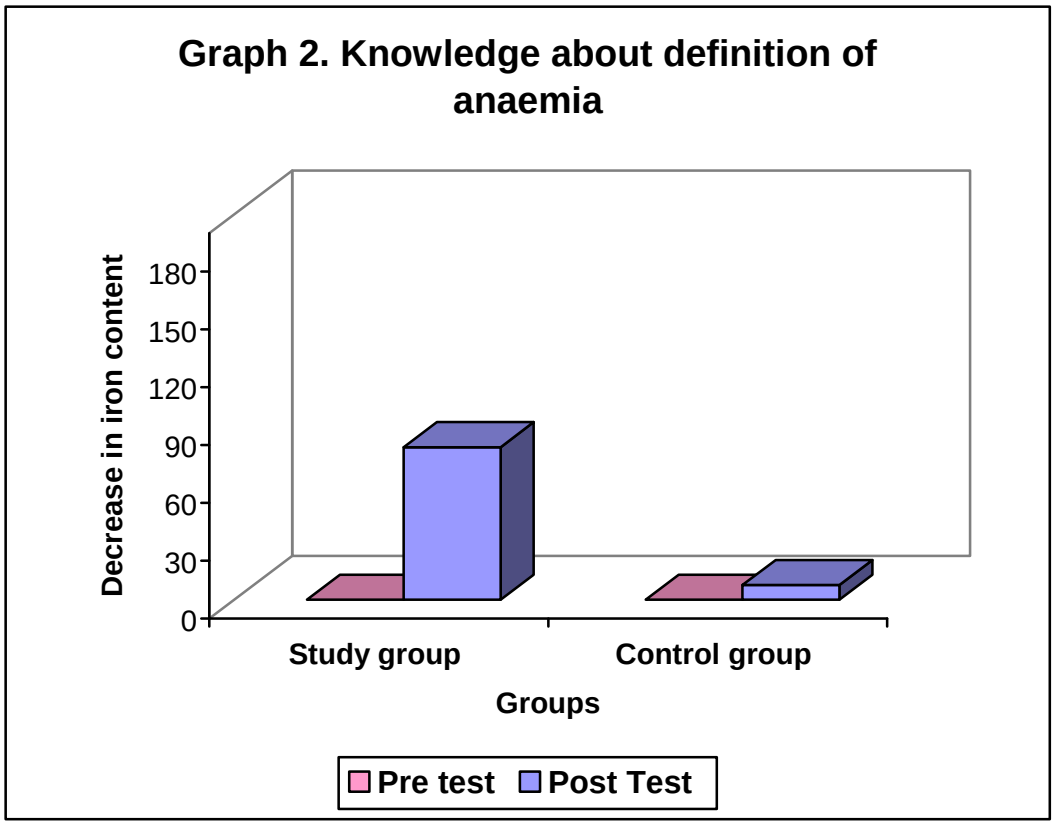
**Table 9. Overall mean score regarding all aspects of anemia**

| | Study group score | | | Control group score | | |
|---|---|---|---|---|---|---|
| | **No.** | **Pre Test** | **Post Test** | **No.** | **Pre Test** | **Post Test** |
| Mean score | 250 | 25.03% | 41.07% | 250 | 25.26% | 25.17% |

Table shows that there was significant improvement observed for overall knowledge about anemia in the study group, where mean difference was 16.04 in the study group and -0.06 in control group.

**Table 10. Knowledge about definition of anaemia**

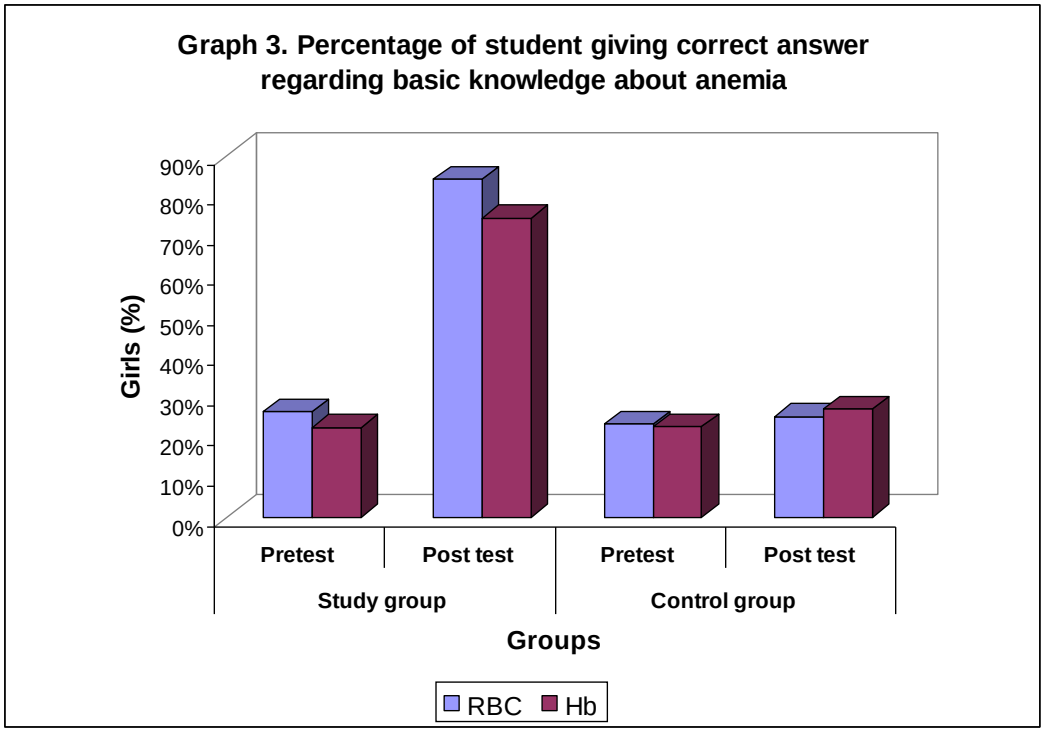
| | Study group | | Control group | |
|---|---|---|---|---|
| | **Pre test** | **Post test** | **Pre test** | **Post test** |
| Decrease in iron content | 0.00% | 79.2% | 0.00% | 7.6% |




This table shows percentage of students knowing about anemia before the intervention in the study group and in the control group was 0.0%. After the intervention 79.2% of girls in study group and 7.6% of girls in control group were aware about definition of anemia.

**Table 11. Basic knowledge about anemia**

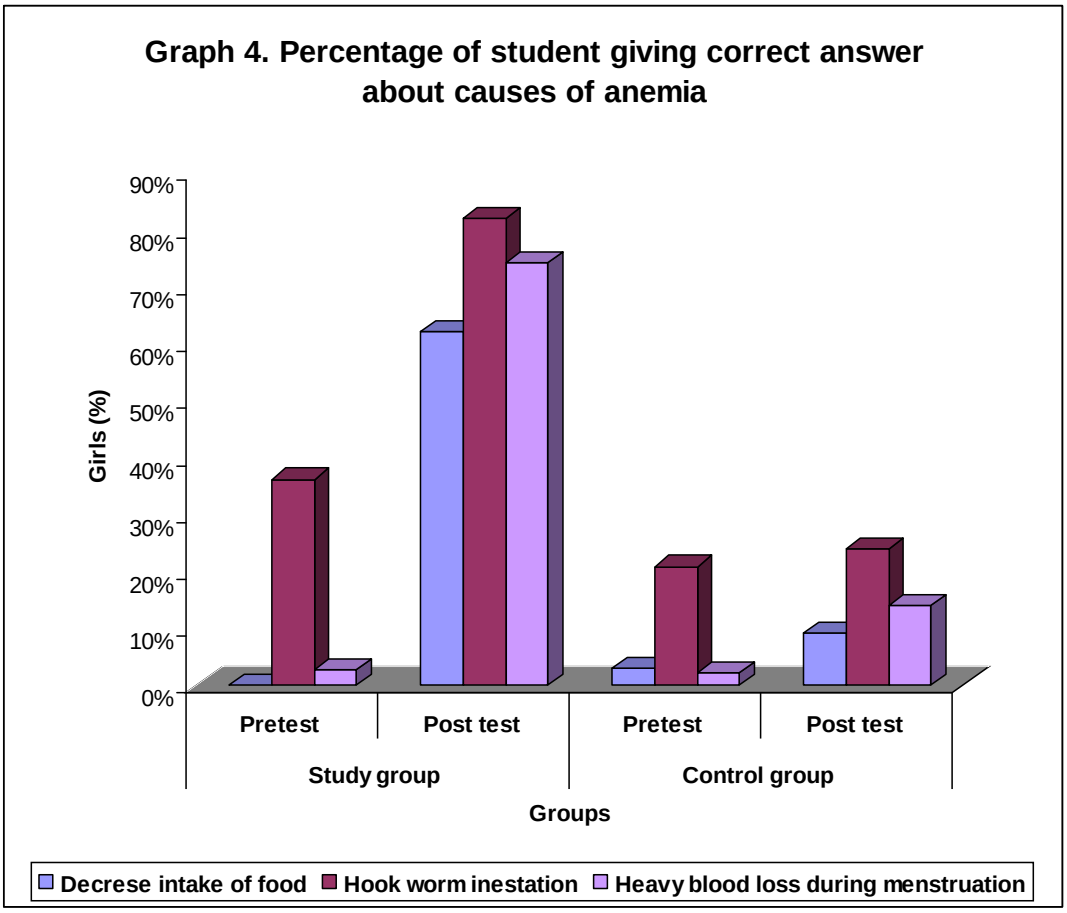
| Basic Knowledge | Study group | | Control group | |
|---|---|---|---|---|
| | Pre test | Post test | Pre test | Post test |
| RBC | 26.12% | 84.04% | 23.2% | 25.02% |
| Hb | 22.3% | 74.5% | 22.4% | 26.9% |




This table shows percentage of students knowing about RBCs and the word haemoglobin before the intervention 26.12% and 22.3% in study group and 23.2% and 25.02% in control group respectively, after the intervention 84.04% and 74.5% in study group and 25.02% and 26.9% in control group respectively.

**Table 12. Knowledge about causes of anemia**

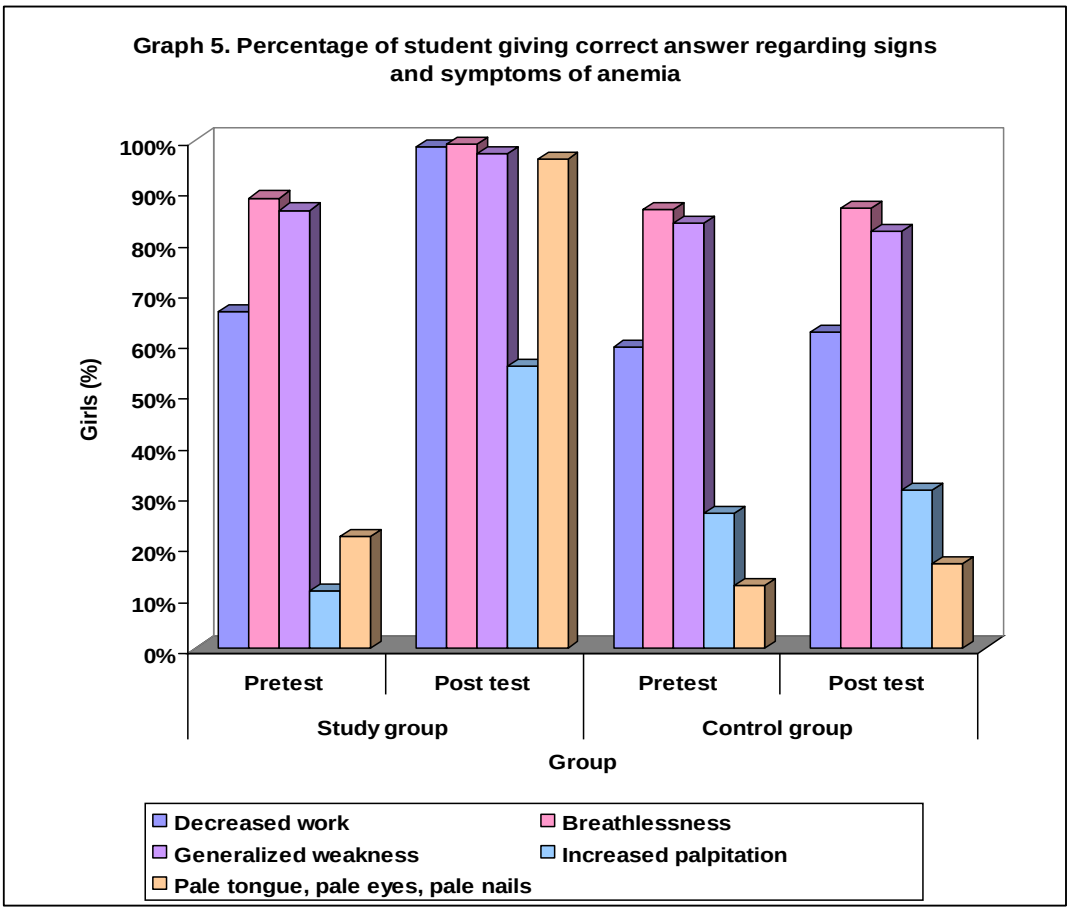
| Causes | Study group | | Control group | |
|---|---|---|---|---|
| | Pre test | Post test | Pre test | Post test |
| Decrease intake of iron rich food | 0.00% | 62.0% | 2.86% | 9.21% |
| Hook –worm infestation | 36.13% | 82.03% | 20.81% | 24.02% |
| Heavy blood loss during menstruation | 2.60% | 74.06% | 2.10% | 14.08% |




This table shows percentage of students knowing about decreased intake of iron rich food, hookworm infestation and heavy blood loss during menstruation as the causes of anemia, before intervention was 0.00%, 36.13% and 2.6% in study group and 2.86%, 20.81% and 2.10% in control group respectively. After the intervention it was 62%, 82.03% and 74.06% in study group and 9.21%, 24.02% and 14.08% in the control group respectively

**Table 13. Knowledge regarding signs and symptoms of anemia**

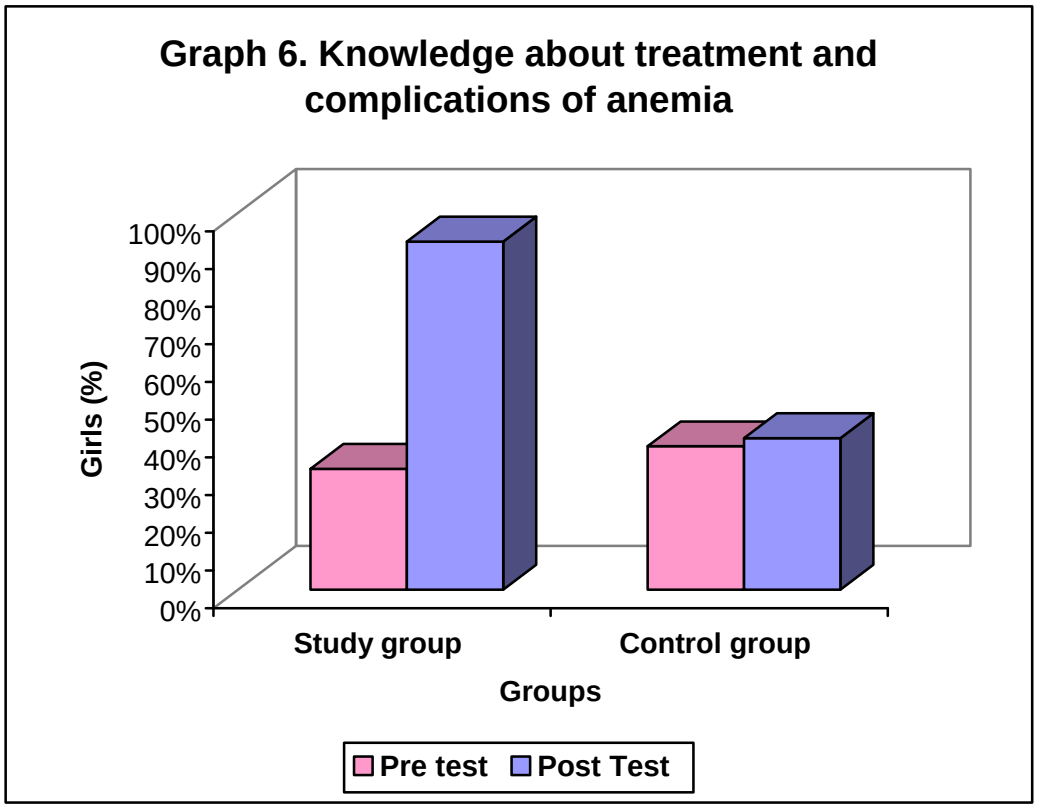
| Signs and symptoms | Study group | | Control group | |
|---|---|---|---|---|
| | Pre test | Post test | Pre test | Post test |
| Decreased work capacity | 66.2% | 98.6% | 59.2% | 62.3% |
| Breathlessness | 88.6% | 99.2% | 86.4% | 86.5% |
| Generalised weakness | 86.2% | 97.4% | 83.6% | 82.1% |
| Increased palpitation | 11.3% | 55.6% | 26.48% | 31.1% |
| Pale tongue, pale eyes, pale nails | 22.08% | 96.16% | 12.3% | 16.54% |



This table shows percentage of students knowing about signs and symptoms before intervention which was 66.2%, 88.6, 86.2%, 11.3%, 22.08% which increased to 98.6%, 99.2%, 97.4%, 55.6%, 91.16% respectively in study group after intervention when compared with control group.

**Table 14. Knowledge about treatment and complications of anemia**

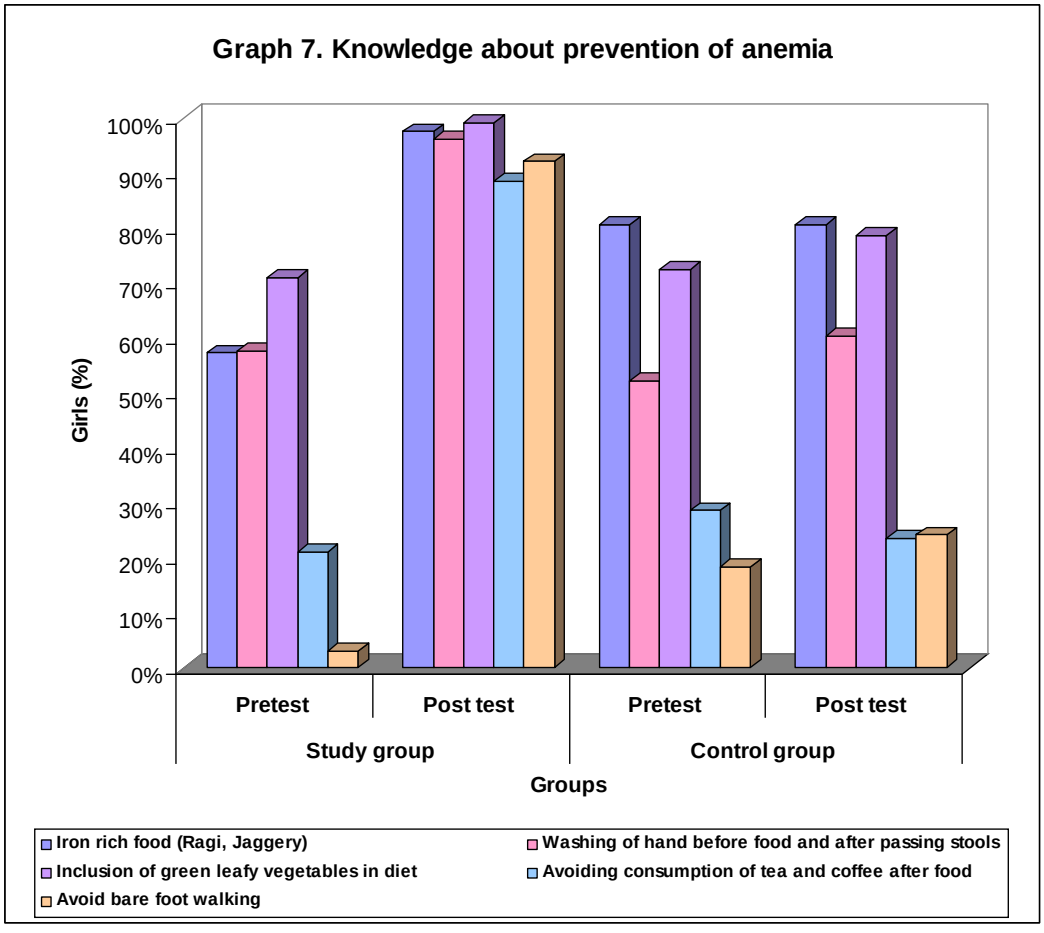
| Treatment and complications | Study group | | Control group | |
|---|---|---|---|---|
| | **Pre test** | **Post test** | **Pre test** | **Post test** |
| Correct answer | 32.0% | 92.3% | 38.0% | 40.2% |




This table shows percentage of students knowing about treatment and complications of anemia. Before intervention, in the study group it was 32% and 38% in the control group. After intervention 92.3% of study group and 40.2% of control group were aware about treatment of anemia.

**Table 15. Knowledge about prevention of anemia**

| Prevention | Study group | | Control group | |
|---|---|---|---|---|
| | Pre test | Post test | Pre test | Post test |
| Iron rich food (Ragi and Jaggery) | 57.30% | 97.6% | 80.72% | 80.6% |
| Washing of hands before food and passing stools | 57.70% | 96.13% | 52.30% | 60.42% |
| Inclusion of green leafy vegetables in diet | 71.08% | 99.2% | 72.40% | 78.60% |
| Avoiding consumption of tea and coffee after food | 21.09% | 88.60% | 28.6% | 23.6% |
| Avoid bare foot walking | 3.02% | 92.16% | 18.38% | 24.16% |



This table shows percentage of students knowing about intake of iron rich food, washing hands before food and passing stools, inclusion of green leafy vegetables in the diet, avoiding consumption of tea and coffee after food and avoid bare foot walking, before the intervention it was 57.30%, 51.70%, 71.08%, 21.09%, 3.02% which increased to 97.6%, 96.3%, 99.2%, 88.60%, 92.16% respectively in study group when compared with control group after intervention.

**Table 16. Pre and post level of knowledge in study group**

| Variables | Pretest | | Post test | | WSRT | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Z | p |
| Definition | -0.86 | 0.34 | 0.78 | 0.59 | 14.112 | <0.001 |
| Basic knowledge | 0.36 | 2.53 | 4.06 | 1.52 | 12.175 | <0.001 |
| Cause | -0.76 | 1.39 | 1.72 | 1 | 13.497 | <0.001 |
| Symptom | 0.94 | 2.18 | 5.72 | 1.12 | 13.806 | <0.001 |
| Treatment | 0.64 | 1.76 | 2.93 | 1.24 | 11.881 | <0.001 |
| Prevention | 0.52 | 1.76 | 7.04 | 1.25 | 13.763 | <0.001 |
| Complications | 0.66 | 1.53 | 1.53 | 1.34 | 6.005 | <0.001 |

Table shows pre and post level of knowledge and change in the level of knowledge which was assessed by using, Wilcoxon's signed ranking test of participants in study group before and after intervention regarding all aspects of anemia such as definition, basics, causes, symptoms, treatment, prevention and complications. However statistically significant change in knowledge is observed with $p<0.001$.

**Table 17. Pre and post level of knowledge in control group**

| Variables | Pretest | | Post test | | WSRT | |
|---|---|---|---|---|---|---|
| | **Mean** | **SD** | **Mean** | **SD** | **Z** | **p** |
| Definition | -0.62 | 0.61 | 0.07 | 0.91 | 9.25 | <0.001 |
| Basic knowledge | 2.2 | 2.57 | 2.2 | 2.08 | 1.168 | <0.243 |
| Cause | -1.1 | 1.51 | -0.72 | 1.55 | 6.759 | <0.001 |
| Symptom | 1.1 | 2.06 | 1.5 | 2.19 | 1.824 | <0.068 |
| Treatment | 1.4 | 1.60 | 1.36 | 1.83 | 0.220 | <0.826 |
| Prevention | 0.26 | 1.77 | 1.38 | 2.21 | 5.736 | <0.001 |
| Complications | -0.09 | 1.57 | 0.13 | 1.53 | 4.895 | <0.001 |

Table shows pre and post level of knowledge and change in the level of knowledge which was assessed by using, Wilcoxon's signed ranking test of participants in control group. However statistically significant change in knowledge is observed only in few aspects such as in definition, causes, prevention and complications with $p<0.001$.

**Table 18. Mean change in average knowledge of study and control group**

| Variable | Mean change in levels of knowledge | | | | Man Whitney U Test | |
|---|---|---|---|---|---|---|
| | Study group | | Control group | | | |
| | Mean | SD | Mean | SD | Z | p |
| Definition | 1.65 | 0.68 | 0.69 | 0.88 | 10.515 | <0.001 |
| Basic knowledge | 3.74 | 3.04 | 0.03 | 1.08 | 13.004 | <0.001 |
| Cause | 2.48 | 1.42 | 0.39 | 0.79 | 16.100 | <0.001 |
| Symptom | 4.78 | 2.07 | 0.39 | 2.64 | 16.139 | <0.001 |
| Treatment | 2.28 | 2.18 | -0.01 | 1.36 | 11.791 | <0.001 |
| Prevention | 6.52 | 2.17 | 1.12 | 2.83 | 16.935 | <0.001 |
| Complications | 0.86 | 2.02 | 0.23 | 0.72 | 4.823 | <0.001 |

Table shows mean change in average knowledge of all aspects of anemia for study and control group. Study group has gained more knowledge then control group which is statistically significant.

# DISCUSSION

Adolescence is a period of rapid physical growth calling for adequate nutrient intake to meet the body growth requirement. It is also a period of emotional and psychological changes during which there is a tendency to reject conventional dietary habits.

Adolescent nutritional problem are common throughout the country. They have to encounter a series of nutritional challenges not only affecting their growth and development but also their livelihood as adults. Yet adolescents remain a largely neglected and hard to reach population especially girls. Thus it is not surprising that adolescent girl populations who are “mothers to be” are considered as the most important section on which the future of nation depends.[11]

The nutritional anemia in this group contributes to high MMR, high incidence of low-birth weight babies, high perinatal mortality and fetal wastage. This phase of life is also important due to the ever-increasing evidence that control of anemia in pregnant women may be more easily achieved, if satisfactory iron status can be ensured during adolescence. Health and nutritional needs of adolescent girls are mostly ignored. A strong focus on improvement in nutritional status of adolescent girls through Information Education Communication is warranted. Adolescence represents a real opportunity to make a difference in lifelong patterns.

Hence, the present study was undertaken to assess the effectiveness of nutritional health education regarding anemia on knowledge, attitude, practices among school going adolescent girls of Belgaum Taluka.

In our study, the age distribution between the control and study group was studied. Both the groups included the students of age ranging 11-14 years. There were 138 students of age 12 years in control group and 168 students in study group. The mean age of adolescents in both the groups was 12years. Hence both the groups can be compared to assess their knowledge about anemia during pre-testing and post-testing.

The average height in the control group was 1.47 meters whereas average weight was 37.9 kg; the values in the study group were 1.47 meters and 37.8 kg respectively. We also compared the BMI in the two groups. The BMI in study group was 18.04 and 18 in control group.

In our study, the socio-economic status, 46% of students were from class V, 31.2% from class IV, 22.8% from class II in study group, 37.6% from class IV, 33.2% from class III, 26% from class V, 2% from class II, 1.2% from class I in control group. This was statistically significant with Chi square= 31.11, DF=3, $p<0.001$.

In the present study, the diet pattern was compared in both the groups, majority of girls (52.4%) in study group and (47.2%) in control group were vegetarians.

In our study, the attainment of menarche by 11-14 years was compared in both the groups. Majority of girls (69.2%) in the study and (68.4%) control group had not attained menarche.

In our study, the history of passing of worms was compared in both the groups. Majority of girls (82%) in the study group and (86.4%) of girls in control group gave no history of passing of worms. This was statistically not significant with Chi square= 1.819, DF=1, p<0.177.

There was significant improvement observed for overall knowledge about anemia in the study group, where mean difference was 16.04 in the study group and -0.06 in control group.

It was observed that before the treatment with albendazole and iron tablet, mean hemoglobin of study group students was 9.1gm%. After intervention about the awareness of anemia and treatment, the mean hemoglobin percentage increased to 10.40 gm% in study group.

A study conducted by Deshmukh. P et al in Nashik, Maharashtra India with a intervention of weekly supplementation of iron and providing nutritional education has significantly reduced the prevalence of anemia from 65.3% at the time of evaluation to 54.3%.[5]

In our study the mean hemoglobin increased from 9.1gm% to 10.4gm% with a intervention of iron supplementation and providing nutritional education.

Puri. S et al conducted a study in Chandigarh showed that health education resulted in increased awareness about balanced diet from 42.4% to 82.2%. Awareness about poor diet as cause of anemia increased from 29.8% to 58.1%. Only 7.6% were aware of normal Hb and after intervention it increased to 77.6%. The intervention increased the knowledge about causes of malnutrition from 23.5% to 88.1%, Initially 30% of adolescents were aware regarding health problems related with obesity which increased to 90% after educational campaign. Overall a significant increase in knowledge regarding various nutrients and its sources was observed as a result of the intervention.[45]

In our study the overall mean score regarding all aspects of anemia increased from 25.03% to 41.07% in the intervention group. The awareness regarding prevention of anemia, intake of iron rich food, washing hands before food and passing stools, inclusion of green leafy vegetables in the diet, avoiding consumption of tea and coffee after food and avoid bare foot walking, before the intervention it was 57.30%, 51.70%, 71.08%, 21.09%, 3.02% which increased to 97.6%, 96.3%, 99.2%, 88.60%, 92.16% respectively in study group when compared with control group after intervention.

Yearul K et al conducted a study in Bangladesh to examine the dietary pattern, nutritional status, anemia and anemia related knowledge among adolescent girls. 68% of them had no idea about anemia. 35% of the participants did not know about the causes of anemia, while 72.3% and 80% respectively knew about the prevention and treatment of anemia.73.8% of them were not aware about sources of iron rich foods.[9]

In our study percentage of students knowing about decreased intake of iron rich food, hookworm infestation and heavy blood loss during menstruation as the causes of anemia, before intervention was 0.00%, 36.13% and 2.6% in study group and 2.86%, 20.81% and 2.10% in control group respectively. After the intervention it was 62%, 82.03% and 74.06% in study group and 9.21%, 24.02% and 14.08% in the control group respectively. No significant improvement was observed in the control group.

Hosseini. M et al conducted an educational intervention study to evaluate the effect of education on Knowledge, Attitude and Practice (K.A.P) in intervention and control groups (each group: 300) among female students in Ghaemshahr. The data was gathered using a questionnaire (include the demographic information, some of question related to knowledge, attitude, practice. K.A.P was assessed before and also 1.5 month after implementation of educational program using the questionnaire: There was a significant change regarding K.A.P in study group after implementation of educational intervention when compared with the control group. . Thus emphasis on the health education in adolescent age is necessary to promote K.A.P. The results indicated that improvement of knowledge could prevent iron deficiency anemia.[46]

In our study, pre and post level of knowledge and change in the level of knowledge was assessed by using, Wilcoxon's signed ranking test of participants in study group before and after intervention regarding all aspects of anemia such as definition, basics, causes, symptoms, treatment, prevention, complications. However statistically significant change in knowledge is observed with $p<0.001$. The mean change in average knowledge of all aspects of anemia for study and

control group, showed that study group has gained more knowledge than control group which is statistically significant with $p<0.001$.

Pande R et al conducted a participatory nutrition education intervention study in Pune to improve dietary behaviors and iron status, to reduce prevalence of iron deficiency anemia in adolescent girls. The intervention focused on providing nutrition education and changing social norms. Changes in dietary behavior in study and control group were increased from 2.9% to 27.7% and 3.5% to 5.8% respectively.[38]

In our study the overall mean score regarding all aspects of anemia increased from 25.03% to 41.07% in the study group, The percentage of students knowing about RBCs and the word hemoglobin before intervention was 26.12% and 22.3% in study group and 23.2% and 25.02% in control group respectively. After intervention 84.04% and 74.5% of students in study group and only 25.02% and 26.9% of students in control group respectively. No significant change in the knowledge in the control group was observed.

Sharma. S et al conducted an intervention study in India, in order to see the awareness of adolescent girls in relation to health and nutritional deficiencies like anemia and also to see the effect of educational intervention on their knowledge levels. It was seen that although knowledge of nutrients increased during post testing, but less number of girls were aware about nutritional deficiency diseases. Knowledge about anemia among girls was 12.5% during pre-test and then increased to 25.8% after post test intervention.[12]

Our study showed that, none of the students knew that decreased iron content in the blood causes anemia in both the groups, but 79.2% of students in study group and only 7.6% of students in control group were aware about definition of anemia after intervention. No significant improvement observed in control group.

Saibaba et al conducted a study in the registered slums under India Population Project-VIII, MCH, located in twin cities of Hyderabad and Secunderabad, Andhra Pradesh - India. Girls between 10 and 19 years of age were covered in the study to assess the nutritional status and dietary intake of adolescent girls and study the impact of IEC programme on their nutritional knowledge and practices. After collection of the baseline data, IEC intervention was carried out for six months and its impact was studied. . Iron deficiency anaemia was found to be the most common nutritional problem in them. After IEC intervention significant proportion of girls could correctly identify the foods rich in various important nutrients. A marked increase in the intake of finger millet or Ragi was observed, which is a very rich source of calcium as well as iron. Though they were not aware earlier, after IEC intervention, 77.6% of girls could correctly identify the foods rich in iron, 55.2% could recall calcium rich foods and 62% could list the energy and protein rich recipes/food articles. Following IEC intervention, the knowledge about physical changes improved significantly. Around 70% of the subjects for the first time received information on growth and development during IEC intervention.[37]

In our study the awareness of prevention of anemia, intake of iron rich food like ragi, jaggery, washing hands before food and passing stools, inclusion

of green leafy vegetables in the diet, avoiding consumption of tea and coffee after food and avoid bare foot walking, before the intervention it was 57.30%, 51.70%, 71.08%, 21.09%, 3.02% which increased to 97.6%, 96.3%, 99.2%, 88.60%, 92.16% respectively after imparting education in the study group when compared with control group after intervention. No improvement was seen in control group. Our study also showed that percentage of students knowing about signs and symptoms of anemia on pre-testing, that is for decreased work capacity it was 66.2%which increased to 98.6%, for breathlessness it was 88.6% which increased to 99.2% ,for generalized weakness it was 86.2% which increased to 97.4%,for palpitations it was 11.3% which increased to 55.6%, for pale tongue, pale eyes ,pale nails it was 22.08% which increased to 91.16% in study group when compared with control group after intervention. No significant improvement was observed in control group. The IEC intervention, therefore, brought about significant improvements in not only in nutritional knowledge of adolescent girls but also translated some of them into action.

A similar study was conducted by Gupta. N et al on a representative group of 50 adolescent girls of age range 13-16 years. The samples were selected by random sampling technique in rural areas of Kurukshetra. A KABP (knowledge, attitude, belief and practices) questionnaire was created considering the important aspect of nutrition. Before imparting nutrition education, the level of nutritional knowledge possessed by respondent was pre-tested by filling the questionnaire. To study the impact of nutrition education, the adolescent girls were imparted special regular sessions for a period of three months. The topics chosen for study were balanced diet, anemia, its causes, prevention and treatment,

various cooking demonstrations, lectures and discussions using teaching aids like charts and leaflets, the effectiveness of the nutrition education among the respondents, which was measured in terms of gain in scores. The mean scores 12.41 ± 1.56 obtained in pre-test was increased to 19.92 ± 1.4 after giving nutrition education. The gain in knowledge of nutrition education score was 7.51 and the quantum of improvement was 1.605.[13]

In our study, the mean change in average knowledge of all aspects of anemia was increased in the intervention group where nutrition education was imparted only to study group which is statistically significant with $p<0.001$.

Another study by Alaofe H et al to assess education and improved iron intakes for treatment of mild iron deficiency anemia in adolescent girls of age 12 to 17 years in southern Benin showed that after 4 weeks of nutrition education combined with an increase in the content and bioavailability of dietary iron for 22 weeks was implemented in the intervention school, but not in the control school. A nutrition knowledge questionnaire, 24-h dietary recalls, anthropometric measurements, iron status indices and screening for malarial and intestinal parasitic infections (IPI) were obtained in both groups Nutrition knowledge scores and mean intakes of nutrients including dietary iron, absorbable iron and vitamin C were higher in the intervention group ($p<0.05$) compared to the control group after 26 weeks.[40]

In our study, the mean change in average knowledge of all aspects of anemia was increased in the intervention group where nutrition education was

imparted, when compared to the control group which is statistically significant with $p<0.001$.

School health services provide an ideal platform to detect the health problems early and treat them. Early detection of the morbidities through regular survey helps in prompt treatment and prevention of anemia.

Adolescents stand at the threshold of adulthood and it is imperative that safe and enabling environment is provided to them to develop capacities for shaping their own future as well as that of nation.

# CONCLUSION

Adolescence is a state or process of growing up from puberty to maturity. The growth spurt during early adolescence mounts pressure on the overall nutritional requirements of adolescent girls and micronutrients too are, therefore, required in higher proportion. Thus, studies addressing the health and nutritional status of adolescents will contribute significantly in developing community based interventions which can go a long way in improving awareness regarding anemia and its sequelae mainly through strategies involving parents, teachers and by promoting nutritional education.

Women's reproductive health is largely influenced by their health status during infancy, childhood and adolescence. Adolescent girls are often considered as a burden of the family due to various socio-cultural factors especially gender inequities. Compared with boys, the adolescent girl's health, nutrition, education and development are more neglected which has adverse effect on their reproductive health. Most girls are not adequately aware of their increased nutritional needs for growth (especially increasing their food intake to meet calorie demands of pubertal growth). They are deprived of adequate health care, good nutrition and opportunity for schooling.

Our study has resulted in significant improvement in the knowledge, development of positive attitudes and healthy practices among study group students regarding anemia after intervention. Participatory nutrition education can influence the nutritional health of the adolescent girls and their dietary behavior. Iron supplementation programmes need to include nutrition education

programmes to be effective. Thus continuous health education of school children in their formative years not only improves their knowledge and develops positive attitude but also helps in following life-long healthy practices. It also helps in imparting this knowledge to their family members, neighbours and friends ensuring the dissemination of the nutritional education which has far reaching intergenerational effects.

# SUMMARY

A Controlled trial which included 500 adolescent school girls of Belgaum Taluka was undertaken to assess the effect of nutritional education on knowledge, attitude, and practice of various aspects of anemia. i.e. definition of anemia, awareness of terminologies like Hemoglobin, RBCs, causes, symptoms, signs, treatment, prevention and complications of anemia.

- Mean age of the girls was 12years in both the control and study group.
- The BMI in both the groups was same.
- Majority of girls belonged to families with income group of class IV and V in both the study group and control group.
- Majority of girls were vegetarians in both the study group and control group.
- Majority of girls had not attained menarche in both the study group and control group.
- Majority of girls gave no history of passing of worms in both the study group and control group.
- Mean hemoglobin values were also significantly higher in the study group than in the control group.

Significant improvement was observed for overall knowledge about anemia in the study group when compared with the control group. Baseline knowledge scores for nutritional knowledge in the study group improved significantly after the intervention whereas the scores in the control group showed no significant improvement.

None of the students in both the groups were aware of the definition of anemia during pre-testing. After the intervention 79.2% of study group and 7.6% of control group were aware about definition of anemia.

Nutrition knowledge scores regarding basic knowledge of anemia, symptoms, and signs, iron rich food, causes, symptoms and signs, treatment, prevention, and complications were significantly higher in the study group than in the control group after eight weeks.

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# ANNEXURE I

## CONSENT OF THE PARENTS FOR PARTICIPATION IN RESEARCH STUDY

Mr. / Mrs. _____,

We are requesting you to enroll your daughter in study titled **"Effect of nutritional health education on the knowledge, attitude and practices about anemia among adolescent school going girls of Belgaum"** conducted by Dr. *** ****** Post Graduate in M.S. Obstetrics & Gynaecology under the guidance of Dr. ******** **********, Associate Professor, Dept of Obstetrics & Gynaecology, J. N. Medical College, Nehru Nagar, Belgaum, under KLE Academy of Higher Education and Research, Belgaum.

I request you to allow your daughter to participate in the study. This study will help us to understand the causes and problems due to anemia in young girls. During the study she will be asked some questions and I kindly request her to answer to the best of her knowledge which will help the health professionals to educate, guide and help the young girls to know about the importance of nutrition, anemia etc.,

If you decide to participate her, she is also free to withdraw at any time.

The purpose of this research is to create increase awareness of nutritional deficiency particularly anemia through health education which will be provided to the students.

**Procedure Involved**

Blood investigation is done by a small prick on her finger with all aseptic precautions two times during the study and two drops of blood will be collected for examination.

**Risks and Benefits**

There are no extra risks involved and benefits are to be evaluated.

**Privacy and Confidentiality**

The only people to know that your daughter is a research subject are members of the research team. No information will be disclosed to others without your written permission except.

1. In emergency to protect the participant's rights and welfare.
2. If required by law.

**Authorization to Publish Results**

When the results of the research are published or discussed, in a conference, no information will be displayed that would disclose your child's identity. Any information that is obtained in connection with this study and that can be identified with your child will remain confidential.

**Financial incentives for participation**

You will not be paid / offered any free gifts for participating in the research. You will not be reimbursed for expenses.

**CONSENT STATEMENT**

I, the undersigned _____ have been explained in my vernacular language about the study and participation of my daughter in the study is voluntary. I was given enough time to clear my doubts and rights as study participant.

In case you have any questions related to the study, you can contact Dr. ******** **********.

In case you have questions about your daughter's rights as a study participant, you can contact Dr. ********* *********

Signature or the Left Thumb Print of Participant or legally authorized representatives.

Participants Name : Signature :

Parent's / Guardians Name : Signature :

Witness Name : Signature :

Investigators Name : Signature :

Date :

Place :

# ANNEXURE II – PROFOMA

Name :

Age :

School :

Standard :

Height :

Weight :

Education of Parents : Occupation of Parents :

Mother : Mother :

Father : Father :

Total Income of the Family :

Family Size :

Menstrual History :

- age of menarche
- menstrual cycles : frequency and duration

**History**

Generalized weakness, easy fatigability

Passing worms in stool

Passing blood in stool

History of blood transfusion

Hospitalization

Medication for chronic illness

**Dietic History :**

Vegetarian (Consumption of green leafy vegetables and fruits)

Mixed (Consumption of Egg and Meat)

General Physical Examination

Eyes :

Nails :

Tongue :

Palm crease :

Nutritional Status :

Poorly built

Moderate built

Well built

Systemic examination (In brief)

CVS :

RS :

PA :

CNS :

Investigations :

Hb gm %

# QUESTIONNIARE

Q. 1 What is Anemia?

a) Decrease in Hemoglobin in blood
b) Increase in Hemoglobin in blood
c) Decrease in carbon-di-oxide in blood
d) Increase in carbon-di-oxide in blood

Q. 2 What is Hemoglobin?

a) Molecule in red blood corpuscles
b) Molecule in white blood corpuscles
c) Molecule in platelets
d) None of the above

Q. 3 Which of the blood cells when decreased cause anemia?

a) Red blood corpuscles
b) White blood corpuscles
c) Platelets
d) All of the above

Q. 4 Which mineral deficiency in the body causes anemia?

a) Deficiency of iron
b) Deficiency of zinc
c) Deficiency of calcium
d) Deficiency of magnesium

Q. 5 Which of these groups is the most likely to get anemia?

| | | | |
|---|---|---|---|
| a) Men | Yes ☐ | No ☐ | Don't know ☐ |
| b) Infants | Yes ☐ | No ☐ | Don't know ☐ |
| c) Teenagers | Yes ☐ | No ☐ | Don't know ☐ |
| d) Elderly | Yes ☐ | No ☐ | Don't know ☐ |
| e) Pregnant women | Yes ☐ | No ☐ | Don't know ☐ |

Q. 6 In an anemic female, the hemoglobin is

a) Around 20 gm / dl

b) Less than 12 gm / dl

c) Greater than 16 gm / dl

d) Between 13 – 18 gm / dl

Q. 7 Heavy blood loss due to menstruation can cause anemia?

Yes ☐ No ☐ Don't know ☐

Q. 8 Decrease in take of food rich in iron can cause anemia?

Yes ☐ No ☐ Don't know ☐

Q. 9 Hookworm infestation can cause anemia?

Yes ☐ No ☐ Don't know ☐

Q. 10 Do anemic adolescent girls have generalized weakness?

Yes ☐ No ☐ Don't know ☐

Q. 11 Do anemic adolescent girls get easily tired?

Yes ☐ No ☐ Don't know ☐

Q. 12 Do anemic girls become breathless easily while carrying out normal activities? ☐ ☐ ☐

Yes No Don't know

Q. 13 Do anemic girls have palpitations?

Yes ☐ No ☐ Don't know ☐

Q. 14 Do anemic girls are prone for repeated infections?

Yes ☐ No ☐ Don't know ☐

Q. 15 Will anemic girls suffer from lack of concentration?

Yes ☐ No ☐ Don't know ☐

Q. 16 Do anemic girls have pale eyes, pale tongue and pale nails?

Yes ☐ No ☐ Don't know ☐

Q. 17 Is there a laboratory test to diagnose anemia?

Yes ☐ No ☐ Don't know ☐

Q. 18 Hemoglobin is anemia diagnosed?

a) Hemoglobin estimation of blood Yes ☐ No ☐ Don't know ☐
b) Measurement of height Yes ☐ No ☐ Don't know ☐
c) Measurement of weight Yes ☐ No ☐ Don't know ☐
d) Urine examination Yes ☐ No ☐ Don't know ☐

Q. 19 Can anemia be prevented?

Yes ☐ No ☐ Don't know ☐

Q. 20 Consumption of balanced diet rich in iron can prevent anemia?

Yes ☐ No ☐ Don't know ☐

Q. 21 Which of the following food is rich in iron?

a) Jaggery Yes ☐ No ☐ Don't know ☐
b) Ragi Yes ☐ No ☐ Don't know ☐
c) Green leafy vegetables Yes ☐ No ☐ Don't know ☐
d) Junk food Yes ☐ No ☐ Don't know ☐

Q. 22 Inclusion of green leafy vegetables in diet can prevent anemia?

Yes ☐ No ☐ Don't know ☐

Q. 23 Washing of hands before food and after passing motion can prevent anemia?

Yes ☐ No ☐ Don't know ☐

Q. 24 Calcium supplementation can prevent anemia?

Yes ☐ No ☐ Don't know ☐

Q. 25 Regular exercise can prevent anemia?

Yes ☐ No ☐ Don't know ☐

Q. 26 Avoiding bare foot walking can prevent anemia?

Yes ☐ No ☐ Don't know ☐

Q. 27 Can anemia be treated?

Yes ☐ No ☐ Don't know ☐

Q. 28 Anemia can be treated by iron tablets?

Yes ☐ No ☐ Don't know ☐

Q. 29 Avoiding consumption of tea, coffee after food can improve absorption of iron?

Yes ☐ No ☐ Don't know ☐

Q. 30 Inclusion of Vitamin C help in iron absorption?

Yes ☐ No ☐ Don't know ☐

Q. 31 Anemic adolescent girls subsequently becoming pregnant will suffer from anemia and its complications?

Yes ☐ No ☐ Don't know ☐

Q. 32 Is severe anemia life threatening?

Yes ☐ No ☐ Don't know ☐

Q. 33 If severe anemia not corrected on time, needs blood transfusion?

Yes ☐ No ☐ Don't know ☐

# ANNEXURE III – PHOTOGRAPHS

**Photograph 1. School girls answering the questionnaire**

**Photograph 2. School system was used as a vehicle together with information, education and communication to bring about awareness regarding anaemia**

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 1 | AK | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | 1 | 3 | -1 | 7 | 1 | 2 | 0 | 6 | 1 | 1 |
| 2 | SS | 12 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 5 | 2 | 2 | 10.0 | 11.0 | 0 | 0 | -3 | 5 | 1 | 3 | 6 | 7 | -2 | 3 | 5 | 8 | -3 | 3 |
| 3 | ZT | 12 | 59 | 38 | 7 | 1 | 3 | 5 | 1 | 2 | 3 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 1 | 3 | 7 | 3 | 4 | -4 | 8 | 1 | 1 |
| 4 | LS | 13 | 59 | 43 | 7 | 2 | 3 | 5 | 1 | 3 | 4 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 4 | 5 | 0 | 2 | 3 | 5 | -2 | 3 | -3 | 6 | 0 | 3 |
| 5 | NP | 13 | 58 | 44 | 7 | 2 | 2 | 4 | 1 | 2 | 5 | 4 | 1 | 2 | 10.0 | 11.0 | -1 | 1 | 4 | 5 | 0 | 2 | -1 | 7 | 1 | 2 | 4 | 7 | -2 | 1 |
| 6 | KM | 12 | 58 | 42 | 7 | 1 | 3 | 5 | 1 | 2 | 3 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 3 | 2 | 6 | -1 | 4 | 1 | 8 | 1 | 3 |
| 7 | FM | 13 | 59 | 35 | 7 | 2 | 2 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 3 | 2 | 5 | 0 | -1 | 3 | 8 | 2 | -1 |
| 8 | AP | 12 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 3 | 3 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 5 | -1 | 2 | 0 | 6 | 3 | 4 | 3 | 8 | 1 | 1 |
| 9 | DB | 13 | 59 | 38 | 7 | 2 | 2 | 4 | 1 | 2 | 5 | 7 | 1 | 2 | 10.0 | 11.0 | -1 | 1 | -3 | 5 | -2 | 2 | -3 | 5 | 3 | 4 | 0 | 6 | 3 | 3 |
| 10 | SM | 12 | 59 | 43 | 7 | 1 | 2 | 2 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | 2 | 5 | -2 | 2 | 5 | 7 | 2 | 1 | 2 | 8 | -2 | 1 |
| 11 | AR | 12 | 58 | 44 | 7 | 1 | 2 | 4 | 1 | 2 | 3 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 4 | 5 | -2 | 1 | -2 | 6 | 4 | 3 | 1 | 5 | 3 | 3 |
| 12 | AG | 12 | 58 | 42 | 7 | 2 | 2 | 1 | 1 | 3 | 5 | 4 | 2 | 2 | 9.0 | 10.2 | 0 | 1 | 1 | 3 | -1 | 2 | -3 | 5 | 0 | 3 | 3 | 8 | 1 | 3 |
| 13 | VG | 12 | 59 | 35 | 7 | 1 | 3 | 5 | 3 | 2 | 3 | 4 | 2 | 2 | 9.0 | 10.3 | -1 | 1 | 3 | 4 | 0 | 2 | 0 | 5 | 0 | 3 | 0 | 6 | 1 | 2 |
| 14 | LS | 12 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | 0 | 3 | 0 | 6 | 3 | 4 | 2 | 8 | 3 | 3 |
| 15 | PT | 12 | 59 | 38 | 7 | 2 | 2 | 3 | 1 | 3 | 5 | 3 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | -2 | 0 | 2 | 6 | -2 | 5 | 1 | 8 | 0 | 3 |
| 16 | RM | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 6 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | -3 | 0 | 0 | 5 | 2 | 2 | 0 | 6 | 0 | 3 |
| 17 | HS | 12 | 58 | 44 | 7 | 2 | 2 | 3 | 1 | 2 | 4 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | 1 | 3 | 0 | 5 | 2 | 2 | 1 | 7 | 1 | 2 |
| 18 | SM | 12 | 58 | 42 | 7 | 2 | 2 | 4 | 3 | 2 | 5 | 5 | 2 | 1 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | 1 | 3 | 1 | 6 | 3 | 4 | 6 | 3 | 0 | -1 |
| 19 | HF | 12 | 59 | 35 | 7 | 2 | 3 | 3 | 1 | 2 | 3 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -1 | 5 | -3 | 2 | 2 | 4 | 2 | 1 | -1 | 8 | -1 | 1 |
| 20 | SS | 12 | 56 | 34 | 7 | 2 | 2 | 4 | 4 | 2 | 3 | 4 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -3 | 3 | -3 | 2 | -1 | 3 | 0 | 4 | 0 | 7 | 3 | 3 |
| 21 | RT | 12 | 59 | 38 | 7 | 2 | 2 | 3 | 1 | 2 | 5 | 3 | 2 | 2 | 9.0 | 11.8 | -1 | 1 | 3 | 3 | 1 | 2 | -2 | 6 | 0 | 4 | -4 | 8 | 2 | 1 |
| 22 | P | 12 | 59 | 43 | 7 | 2 | 3 | 3 | 1 | 3 | 5 | 4 | 2 | 1 | 9.0 | 9.8 | -1 | 1 | -2 | 5 | 0 | 2 | 3 | 5 | 0 | 3 | 0 | 8 | 0 | 3 |
| 23 | A | 12 | 58 | 44 | 7 | 1 | 3 | 5 | 1 | 2 | 5 | 5 | 2 | 1 | 10.0 | 9.8 | -1 | -1 | -1 | 3 | 0 | 2 | 3 | 5 | -2 | 4 | 0 | 7 | 1 | 1 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 24 | PP | 12 | 58 | 42 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 4 | 2 | 1 | 9.0 | 9.8 | -1 | -1 | 1 | 5 | 1 | 2 | 3 | 5 | -1 | 1 | -3 | 6 | -3 | 3 |
| 25 | SP | 12 | 59 | 35 | 7 | 2 | 3 | 4 | 1 | 2 | 4 | 3 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | -4 | 0 | -2 | 2 | -2 | 6 | 1 | 3 | 3 | 8 | 0 | 0 |
| 26 | NS | 12 | 59 | 34 | 7 | 1 | 2 | 4 | 1 | 2 | 5 | 6 | 1 | 2 | 10.0 | 10.2 | -1 | 1 | -2 | 5 | 0 | 2 | 0 | 5 | 0 | 3 | 0 | 8 | 1 | 2 |
| 27 | SP | 12 | 56 | 38 | 7 | 1 | 2 | 5 | 1 | 2 | 3 | 9 | 1 | 2 | 9.0 | 10.6 | -1 | -1 | 1 | 5 | -1 | 0 | 2 | 6 | 0 | 3 | -2 | 6 | 2 | -1 |
| 28 | ZK | 12 | 59 | 43 | 7 | 1 | 3 | 5 | 1 | 2 | 4 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 1 | 5 | -3 | 0 | 3 | 7 | -2 | 3 | -1 | 7 | 0 | 1 |
| 29 | RN | 12 | 59 | 44 | 7 | 1 | 3 | 5 | 1 | 3 | 4 | 6 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | 1 | 5 | 0 | 0 | 2 | 7 | 2 | 4 | 0 | 8 | 1 | 1 |
| 30 | MK | 12 | 58 | 42 | 7 | 2 | 3 | 4 | 1 | 2 | 3 | 6 | 2 | 2 | 10.0 | 10.0 | -1 | 1 | 1 | 5 | 0 | 2 | -1 | 5 | 1 | 2 | 0 | 8 | 3 | 3 |
| 31 | RA | 12 | 58 | 35 | 7 | 2 | 3 | 4 | 1 | 2 | 4 | 8 | 1 | 2 | 9.0 | 11.0 | 0 | 1 | -2 | 5 | 0 | 2 | 3 | 7 | -2 | 3 | 0 | 8 | 0 | 0 |
| 32 | AM | 12 | 59 | 34 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 5 | 1 | 2 | 9.0 | 11.0 | 0 | 1 | 3 | 3 | 0 | 3 | 0 | 7 | 3 | 4 | 2 | 6 | 0 | 0 |
| 33 | SP | 12 | 56 | 38 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 3 | -1 | 1 | 3 | 7 | -2 | 3 | 1 | 8 | 1 | 2 |
| 34 | KR | 12 | 59 | 43 | 7 | 2 | 2 | 3 | 3 | 3 | 5 | 6 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -3 | 5 | 1 | 3 | -1 | 3 | 1 | 2 | 1 | 5 | 2 | -1 |
| 35 | KD | 12 | 59 | 44 | 7 | 2 | 2 | 3 | 1 | 2 | 4 | 4 | 1 | 2 | 9.0 | 11.0 | 0 | 1 | -3 | 5 | 1 | 3 | -1 | 7 | -1 | 4 | 2 | 8 | 0 | 1 |
| 36 | SA | 12 | 58 | 42 | 7 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 9.0 | 11.2 | -1 | 1 | 2 | 5 | -3 | 1 | 6 | 7 | 0 | -1 | 2 | 6 | 1 | 1 |
| 37 | MP | 11 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.0 | 0 | 0 | 4 | 5 | 0 | 2 | 3 | 7 | 3 | 4 | 3 | 8 | 1 | 1 |
| 38 | JK | 12 | 56 | 42 | 7 | 1 | 2 | 4 | 1 | 2 | 5 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | 0 | 2 | 3 | 5 | 3 | 4 | 1 | 8 | -3 | 3 |
| 39 | RS | 13 | 59 | 44 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 3 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 0 | -3 | 3 | -1 | 7 | 2 | 1 | 1 | 6 | 1 | 1 |
| 40 | AI | 12 | 59 | 42 | 7 | 2 | 3 | 4 | 3 | 3 | 3 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 3 | 2 | 6 | 4 | 3 | 1 | 7 | 0 | 3 |
| 41 | PK | 12 | 58 | 35 | 7 | 2 | 3 | 4 | 1 | 2 | 4 | 4 | 2 | 1 | 9.0 | 10.0 | -1 | 1 | 2 | 0 | -1 | 2 | 2 | 5 | 0 | 3 | -1 | 3 | -2 | 1 |
| 42 | SA | 12 | 58 | 34 | 7 | 1 | 3 | 3 | 1 | 3 | 3 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -2 | 3 | -2 | 2 | 0 | 6 | 0 | 3 | 0 | 8 | 1 | 3 |
| 43 | UD | 13 | 59 | 38 | 7 | 2 | 2 | 3 | 1 | 3 | 4 | 4 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | 2 | 5 | -2 | 2 | -3 | 5 | 3 | 4 | -2 | 7 | 2 | -1 |
| 44 | SD | 11 | 56 | 43 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 5 | 1 | 2 | 10.0 | 11.2 | -1 | 1 | 2 | 5 | -2 | 1 | 5 | 7 | -2 | 5 | -3 | 8 | 1 | 1 |
| 45 | SB | 13 | 59 | 44 | 7 | 1 | 3 | 4 | 5 | 2 | 3 | 3 | 1 | 1 | 9.0 | 11.4 | -1 | 1 | 2 | 4 | -1 | 2 | -2 | 6 | 2 | 2 | 0 | 8 | 3 | 3 |
| 46 | RK | 12 | 59 | 42 | 7 | 1 | 2 | 4 | 1 | 1 | 3 | 5 | 2 | 2 | 9.0 | 11.8 | -1 | 1 | 2 | 4 | 0 | 2 | -3 | 5 | 2 | 2 | 0 | 7 | -2 | 1 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 47 | AS | 12 | 59 | 43 | 7 | 1 | 2 | 3 | 1 | 2 | 3 | 6 | 2 | 2 | 10.0 | 11.6 | 0 | 1 | -3 | 5 | 0 | 3 | 0 | 5 | 3 | 4 | 0 | 6 | 3 | 3 |
| 48 | RM | 12 | 56 | 43 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 11.6 | -1 | 1 | -3 | 5 | -2 | 0 | 0 | 6 | 2 | 1 | 0 | 8 | 1 | 3 |
| 49 | RB | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 5 | 2 | 1 | 9.0 | 10.8 | -1 | 1 | -3 | 5 | -3 | 0 | 2 | 6 | 0 | 4 | 2 | 8 | 1 | 2 |
| 50 | DK | 12 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 3 | 4 | 2 | 1 | 9.0 | 10.6 | -1 | 1 | 4 | 5 | 1 | 3 | 0 | 5 | 0 | 4 | 1 | 6 | 3 | 3 |
| 51 | AK | 12 | 58 | 44 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 4 | 2 | 1 | 10.0 | 10.8 | -1 | 1 | 4 | 5 | 1 | 3 | 0 | 5 | 0 | 3 | 1 | 7 | 0 | 3 |
| 52 | CRV | 11 | 58 | 42 | 7 | 1 | 3 | 4 | 5 | 4 | 3 | 5 | 2 | 2 | 9.0 | 10.8 | -1 | 1 | -3 | 5 | -3 | 2 | 1 | 6 | -2 | 4 | 2 | 8 | 0 | 3 |
| 53 | SM | 12 | 59 | 35 | 7 | 2 | 3 | 3 | 1 | 3 | 5 | 6 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 2 | 2 | 4 | -1 | 1 | 2 | 8 | 1 | 2 |
| 54 | AD | 12 | 56 | 34 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 5 | 1 | 2 | -1 | 3 | 1 | 3 | 3 | 8 | 0 | -1 |
| 55 | GS | 11 | 59 | 38 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | 0 | 2 | -2 | 6 | 0 | 3 | 1 | 6 | -1 | 1 |
| 56 | AB | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 5 | 0 | 2 | 3 | 5 | 0 | 3 | 1 | 8 | 3 | 3 |
| 57 | MK | 11 | 54 | 44 | 7 | 1 | 3 | 4 | 4 | 2 | 5 | 5 | 2 | 2 | 9.0 | 10.6 | -1 | 1 | 4 | 5 | 1 | 2 | 3 | 5 | -2 | 3 | 1 | 5 | 2 | 1 |
| 58 | SG | 12 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 10.4 | -1 | -1 | 1 | 3 | -2 | 2 | 3 | 5 | 2 | 4 | -1 | 8 | 0 | 3 |
| 59 | AJ | 11 | 56 | 43 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | -1 | 3 | 4 | 0 | 2 | -2 | 6 | 1 | 2 | 0 | 6 | 1 | 1 |
| 60 | DM | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | -1 | 0 | 0 | 5 | -2 | 3 | -2 | 8 | -3 | 3 |
| 61 | AV | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | -3 | 0 | 2 | 6 | 3 | 4 | -3 | 8 | 0 | 0 |
| 62 | HB | 11 | 58 | 42 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | -1 | 3 | 3 | 0 | 0 | 3 | 7 | -2 | 3 | 0 | 6 | 1 | 2 |
| 63 | GJ | 13 | 58 | 44 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 3 | 1 | 2 | 9.0 | 10.8 | -1 | 1 | -1 | 5 | 0 | 2 | 2 | 7 | 1 | 2 | 0 | 7 | 2 | -1 |
| 64 | LG | 12 | 59 | 42 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 5 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | -1 | 5 | 0 | 2 | -1 | 5 | -1 | 4 | 0 | 3 | 0 | 1 |
| 65 | SM | 12 | 56 | 35 | 7 | 1 | 3 | 4 | 1 | 4 | 5 | 6 | 1 | 2 | 10.0 | 10.2 | -1 | 1 | -1 | 5 | 0 | 3 | 3 | 7 | 0 | -1 | 2 | 8 | 1 | 1 |
| 66 | NB | 12 | 59 | 34 | 7 | 2 | 3 | 4 | 1 | 3 | 3 | 8 | 1 | 2 | 9.0 | 10.0 | 0 | 1 | -3 | 3 | -1 | 1 | 0 | 7 | 3 | 4 | 1 | 7 | 3 | 3 |
| 67 | VP | 12 | 59 | 38 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 4 | 1 | 2 | 9.0 | 10.2 | 0 | 1 | 3 | 3 | 1 | 3 | 3 | 7 | 3 | 4 | 1 | 8 | 0 | 0 |
| 68 | SG | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 4 | 1 | 1 | 10.0 | 9.8 | -1 | 1 | -2 | 5 | 1 | 3 | -1 | 3 | 2 | 1 | 2 | 8 | 0 | 0 |
| 69 | PB | 12 | 56 | 44 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 9.0 | 9.8 | -1 | 1 | -1 | 3 | -3 | 1 | -1 | 7 | 4 | 3 | 2 | 7 | 1 | 2 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 70 | PK | 12 | 59 | 42 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 3 | 2 | 2 | 9.0 | 10.2 | 0 | 1 | 1 | 5 | 0 | 2 | 6 | 7 | 0 | 3 | 3 | 6 | 2 | -1 |
| 71 | RH | 12 | 59 | 43 | 7 | 1 | 3 | 4 | 3 | 2 | 5 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -4 | 0 | 0 | 2 | 3 | 7 | 0 | 3 | 1 | 8 | 0 | 1 |
| 72 | SS | 13 | 58 | 43 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 2 | 1 | 10.0 | 10.0 | 0 | 0 | -2 | 5 | -3 | 3 | 3 | 5 | 3 | 4 | 1 | 8 | 1 | 1 |
| 73 | MF | 13 | 58 | 35 | 7 | 2 | 3 | 3 | 1 | 3 | 5 | 6 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 1 | 5 | -3 | 3 | -1 | 7 | -2 | 5 | 1 | 6 | 1 | 1 |
| 74 | AB | 12 | 59 | 42 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 3 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 1 | 5 | -1 | 2 | 2 | 6 | 2 | 2 | -1 | 7 | -3 | 3 |
| 75 | AP | 12 | 56 | 44 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 7 | 1 | 2 | 9.0 | 10.6 | -1 | 1 | 1 | 5 | -2 | 2 | 2 | 5 | 2 | 2 | 0 | 8 | 1 | 1 |
| 76 | NT | 12 | 59 | 42 | 7 | 2 | 3 | 4 | 3 | 2 | 5 | 5 | 1 | 1 | 9.0 | 10.6 | -1 | 1 | 1 | 5 | -2 | 2 | 0 | 6 | 3 | 4 | -2 | 8 | 0 | 3 |
| 77 | SB | 12 | 59 | 35 | 7 | 2 | 1 | 4 | 3 | 3 | 5 | 4 | 1 | 1 | 9.0 | 10.8 | -1 | 1 | -2 | 5 | -2 | 1 | -3 | 5 | 2 | 1 | -3 | 8 | -2 | 1 |
| 78 | SP | 13 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 7 | 2 | 1 | 9.0 | 10.2 | -1 | 1 | 3 | 3 | -1 | 2 | 5 | 7 | 0 | 4 | 0 | 6 | 1 | 3 |
| 79 | VM | 12 | 58 | 38 | 7 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 3 | 0 | 2 | -2 | 6 | 0 | 4 | 0 | 8 | 2 | -1 |
| 80 | EB | 13 | 58 | 43 | 7 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | 0 | 3 | -3 | 5 | 0 | 3 | 0 | 5 | 1 | 1 |
| 81 | NH | 12 | 59 | 44 | 7 | 1 | 3 | 3 | 1 | 2 | 3 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -3 | 5 | -2 | 0 | 0 | 5 | -2 | 4 | 2 | 8 | 3 | 3 |
| 82 | AD | 12 | 56 | 42 | 7 | 1 | 1 | 4 | 3 | 2 | 4 | 5 | 2 | 2 | 9.0 | 9.9 | 0 | 1 | 2 | 5 | -3 | 0 | 0 | 6 | -1 | 1 | 1 | 6 | -2 | 1 |
| 83 | SN | 12 | 59 | 43 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 5 | 2 | 2 | 9.0 | 11.4 | -1 | 1 | 4 | 5 | 1 | 3 | 2 | 6 | 1 | 3 | 1 | 8 | 3 | 3 |
| 84 | AK | 12 | 59 | 43 | 7 | 1 | 1 | 4 | 3 | 3 | 3 | 4 | 2 | 2 | 9.0 | 9.8 | -1 | 1 | -1 | 5 | 1 | 3 | 0 | 5 | 0 | 3 | 2 | 8 | 1 | 3 |
| 85 | KK | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 4 | 3 | 12 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 0 | -3 | 2 | 0 | 5 | 0 | 3 | 2 | 6 | 1 | 2 |
| 86 | KS | 12 | 56 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 3 | 5 | 1 | 2 | 10.0 | 10.2 | -1 | 1 | -3 | 5 | -3 | 2 | 1 | 6 | -2 | 3 | 3 | 7 | 3 | 3 |
| 87 | AH | 11 | 59 | 42 | 6 | 1 | 1 | 4 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 0 | 1 | 2 | 2 | 4 | 2 | 4 | 1 | 3 | 0 | 3 |
| 88 | AS | 11 | 59 | 35 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 3 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -2 | 3 | 0 | 2 | -1 | 3 | 1 | 2 | 1 | 8 | 0 | 3 |
| 89 | NS | 11 | 58 | 40 | 6 | 1 | 1 | 4 | 1 | 4 | 3 | 4 | 2 | 2 | 10.0 | 11.0 | -1 | 1 | 2 | 5 | 0 | 2 | -2 | 6 | -2 | 3 | 1 | 7 | 1 | 2 |
| 90 | RP | 11 | 58 | 43 | 6 | 1 | 3 | 4 | 1 | 4 | 5 | 4 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 5 | 1 | 2 | 3 | 5 | 3 | 4 | -1 | 8 | 0 | -1 |
| 91 | GS | 11 | 59 | 38 | 6 | 1 | 1 | 4 | 1 | 2 | 3 | 15 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 4 | -2 | 2 | 3 | 5 | -2 | 3 | 0 | 8 | -1 | 1 |
| 92 | SD | 11 | 56 | 38 | 6 | 1 | 3 | 3 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 4 | 0 | 2 | 3 | 5 | 1 | 2 | -2 | 7 | 3 | 3 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 93 | AK | 11 | 59 | 37 | 6 | 1 | 2 | 4 | 1 | 2 | 5 | 5 | 1 | 2 | 10.0 | 10.0 | -1 | -1 | -3 | 5 | -1 | 0 | -2 | 6 | -1 | 4 | -3 | 6 | 2 | 1 |
| 94 | YM | 11 | 49 | 36 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | -1 | -3 | 5 | -3 | 0 | 0 | 5 | 0 | -1 | 0 | 8 | 0 | 3 |
| 95 | SR | 11 | 58 | 43 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 4 | 1 | 1 | 9.0 | 11.0 | -1 | 1 | -3 | 5 | 0 | 0 | 2 | 6 | 3 | 4 | 0 | 8 | 1 | 1 |
| 96 | GK | 11 | 58 | 44 | 6 | 1 | 2 | 4 | 1 | 2 | 5 | 6 | 1 | 2 | 9.0 | 11.6 | -1 | 1 | 4 | 5 | 0 | 2 | 3 | 7 | 3 | 4 | 0 | 6 | -3 | 3 |
| 97 | SD | 11 | 59 | 43 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | -1 | 4 | 5 | 0 | 2 | 2 | 7 | 2 | 1 | 2 | 7 | 0 | 0 |
| 98 | ST | 11 | 56 | 36 | 6 | 1 | 3 | 4 | 5 | 4 | 3 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -3 | 5 | 0 | 3 | -1 | 5 | 4 | 3 | 1 | 8 | 1 | 2 |
| 99 | SS | 11 | 59 | 36 | 6 | 1 | 2 | 3 | 3 | 3 | 5 | 5 | 2 | 1 | 9.0 | 9.8 | -1 | 1 | -3 | 5 | -1 | 1 | 3 | 7 | 0 | 3 | 1 | 8 | 2 | -1 |
| 100 | SD | 11 | 59 | 35 | 6 | 1 | 3 | 4 | 1 | 2 | 5 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 5 | 1 | 3 | 0 | 7 | 0 | 3 | 2 | 8 | 0 | 1 |
| 101 | AB | 12 | 59 | 38 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 2 | 2 | 9.0 | 10.2 | 0 | 1 | -3 | 5 | 1 | 3 | 3 | 7 | 3 | 4 | 2 | 6 | 1 | 1 |
| 102 | SK | 12 | 56 | 37 | 6 | 1 | 3 | 3 | 1 | 2 | 5 | 6 | 1 | 2 | 9.0 | 10.0 | 0 | 1 | 2 | 5 | -3 | 1 | -1 | 3 | -2 | 5 | 3 | 8 | 3 | 3 |
| 103 | VJ | 13 | 59 | 38 | 7 | 1 | 2 | 4 | 3 | 2 | 4 | 4 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 4 | 5 | 0 | 2 | -1 | 7 | 2 | 2 | 1 | 5 | 0 | 0 |
| 104 | SB | 11 | 59 | 42 | 6 | 1 | 2 | 4 | 3 | 3 | 5 | 4 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 1 | 3 | 0 | 2 | 6 | 7 | 2 | 2 | 1 | 8 | 0 | 0 |
| 105 | SF | 12 | 58 | 39 | 6 | 1 | 3 | 2 | 1 | 3 | 3 | 4 | 1 | 1 | 9.0 | 10.0 | 0 | 1 | 3 | 4 | -3 | 3 | 3 | 7 | 3 | 4 | 1 | 6 | 1 | 2 |
| 106 | SK | 12 | 58 | 38 | 7 | 1 | 2 | 4 | 1 | 3 | 4 | 5 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | 3 | 3 | -3 | 3 | 3 | 5 | 2 | 1 | -1 | 8 | 2 | -1 |
| 107 | GB | 12 | 59 | 38 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 8 | 2 | 2 | 10.0 | 11.0 | 0 | 0 | 3 | 3 | -1 | 2 | -1 | 7 | 0 | 4 | 0 | 8 | 0 | 1 |
| 108 | NS | 11 | 56 | 34 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | -2 | 2 | 2 | 6 | 0 | 4 | -2 | 6 | 1 | 1 |
| 109 | KS | 11 | 59 | 36 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | -2 | 2 | 2 | 5 | 0 | 3 | -3 | 7 | 1 | 1 |
| 110 | SM | 12 | 58 | 36 | 6 | 1 | 2 | 4 | 1 | 3 | 5 | 5 | 2 | 2 | 10.0 | 9.9 | -1 | 1 | -1 | 5 | -2 | 1 | 0 | 6 | -2 | 4 | 0 | 3 | -3 | 3 |
| 111 | PD | 12 | 58 | 38 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 6 | 2 | 2 | 9.0 | 11.4 | -1 | 1 | -1 | 5 | -1 | 2 | -3 | 5 | -1 | 1 | 3 | 8 | 1 | 1 |
| 112 | SM | 12 | 59 | 42 | 6 | 1 | 2 | 4 | 1 | 3 | 5 | 4 | 2 | 2 | 9.0 | 9.8 | -1 | 1 | -3 | 3 | 0 | 2 | 5 | 7 | 1 | 3 | 0 | 7 | 0 | 3 |
| 113 | JP | 12 | 56 | 41 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | 0 | 3 | -2 | 6 | 0 | 3 | 5 | 8 | -2 | 1 |
| 114 | KB | 11 | 59 | 41 | 6 | 1 | 2 | 4 | 1 | 4 | 3 | 6 | 1 | 2 | 10.0 | 10.2 | -1 | 1 | -2 | 5 | -2 | 0 | -3 | 5 | 0 | 3 | -4 | 8 | 1 | 3 |
| 115 | AK | 12 | 59 | 38 | 6 | 1 | 2 | 4 | 1 | 3 | 5 | 6 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -1 | 3 | -3 | 0 | 0 | 5 | -2 | 3 | -3 | 7 | 2 | -1 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 116 | JF | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 1 | 5 | 1 | 3 | 0 | 6 | 2 | 4 | 4 | 6 | 1 | 1 |
| 117 | TP | 12 | 56 | 37 | 6 | 1 | 2 | 4 | 3 | 3 | 5 | 3 | 2 | 2 | 9.0 | 11.0 | 0 | 1 | -4 | 0 | 1 | 3 | 2 | 6 | 1 | 2 | 1 | 8 | 3 | 3 |
| 118 | K | 12 | 59 | 35 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 6 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -2 | 5 | -3 | 2 | 0 | 5 | -2 | 3 | 3 | 8 | -2 | 1 |
| 119 | RH | 11 | 59 | 35 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 8 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 1 | 5 | -3 | 2 | 0 | 5 | 3 | 4 | 3 | 6 | 3 | 3 |
| 120 | PA | 11 | 58 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 14 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | 1 | 5 | 1 | 2 | 1 | 6 | -2 | 3 | 0 | 7 | 1 | 3 |
| 121 | GB | 11 | 58 | 34 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 8 | 1 | 2 | 9.0 | 11.4 | -1 | 1 | 1 | 5 | 0 | 2 | 2 | 4 | 1 | 2 | 2 | 8 | 1 | 2 |
| 122 | SA | 11 | 59 | 34 | 6 | 1 | 2 | 4 | 1 | 3 | 5 | 4 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 1 | 5 | 0 | 2 | -1 | 3 | -1 | 4 | 1 | 8 | 3 | 3 |
| 123 | PB | 11 | 56 | 36 | 6 | 1 | 2 | 4 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -2 | 5 | 1 | 2 | -2 | 6 | 0 | -1 | 3 | 8 | 0 | 3 |
| 124 | KK | 12 | 59 | 37 | 6 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 2 | 2 | 9.0 | 9.9 | -1 | 1 | 3 | 3 | -2 | 2 | 3 | 5 | 3 | 4 | 0 | 6 | 0 | 3 |
| 125 | ST | 12 | 58 | 37 | 7 | 2 | 3 | 3 | 1 | 2 | 3 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 3 | 0 | 2 | 3 | 5 | 3 | 4 | 2 | 8 | 1 | 2 |
| 126 | NN | 12 | 58 | 37 | 7 | 1 | 2 | 4 | 1 | 2 | 5 | 5 | 1 | 1 | 9.0 | 9.8 | -1 | 1 | -3 | 5 | -1 | 0 | 3 | 5 | 2 | 1 | 1 | 5 | 0 | -1 |
| 127 | KC | 12 | 59 | 37 | 7 | 2 | 2 | 3 | 1 | 2 | 5 | 11 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 0 | -2 | 6 | 4 | 3 | 0 | 8 | -1 | 1 |
| 128 | DM | 12 | 56 | 34 | 7 | 2 | 3 | 4 | 1 | 2 | 3 | 5 | 1 | 2 | 10.0 | 10.2 | -1 | -1 | 2 | 5 | 0 | 0 | 0 | 5 | 0 | 3 | 1 | 6 | 3 | 3 |
| 129 | SN | 12 | 59 | 36 | 7 | 2 | 2 | 4 | 3 | 2 | 5 | 6 | 1 | 2 | 9.0 | 10.0 | -1 | -1 | 4 | 5 | 0 | 2 | 2 | 6 | 0 | 3 | 6 | 8 | 2 | 1 |
| 130 | UR | 11 | 59 | 34 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 1 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | 0 | 2 | 3 | 7 | 3 | 4 | -1 | 8 | 0 | 3 |
| 131 | SS | 11 | 59 | 35 | 6 | 1 | 3 | 2 | 1 | 2 | 5 | 4 | 1 | 1 | 10.0 | 10.0 | -1 | 1 | 2 | 0 | 0 | 3 | 2 | 7 | -2 | 5 | 0 | 6 | 1 | 1 |
| 132 | DH | 12 | 56 | 42 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 5 | 2 | 1 | 9.0 | 10.0 | -1 | -1 | -3 | 5 | -1 | 1 | -1 | 5 | 2 | 2 | -4 | 7 | -3 | 3 |
| 133 | NG | 12 | 59 | 41 | 6 | 2 | 2 | 4 | 3 | 2 | 4 | 4 | 2 | 2 | 9.0 | 10.8 | -1 | 1 | 2 | 0 | 1 | 3 | 3 | 7 | 2 | 2 | 0 | 3 | 0 | 0 |
| 134 | YG | 11 | 59 | 42 | 6 | 1 | 2 | 1 | 1 | 3 | 4 | 6 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | -2 | 3 | 1 | 3 | 0 | 7 | 3 | 4 | 0 | 8 | 1 | 2 |
| 135 | PP | 12 | 58 | 34 | 6 | 1 | 2 | 2 | 1 | 2 | 5 | 9 | 2 | 2 | 10.0 | 11.4 | -1 | 1 | 2 | 5 | -3 | 1 | 3 | 7 | 2 | 1 | -3 | 7 | 2 | -1 |
| 136 | SD | 12 | 58 | 39 | 6 | 2 | 2 | 2 | 1 | 3 | 3 | 4 | 1 | 2 | 9.0 | 10.0 | 0 | 1 | 2 | 5 | 0 | 2 | -1 | 3 | 0 | 4 | 3 | 8 | 0 | 1 |
| 137 | ML | 11 | 59 | 38 | 6 | 1 | 3 | 2 | 1 | 3 | 3 | 4 | 1 | 2 | 9.0 | 11.2 | 0 | 1 | 2 | 4 | 0 | 2 | -1 | 7 | 0 | 4 | 0 | 8 | 1 | 1 |
| 138 | NH | 11 | 56 | 40 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 4 | 1 | 2 | 9.0 | 9.9 | -1 | 1 | 2 | 4 | -3 | 3 | 6 | 7 | 0 | 3 | -2 | 7 | 3 | 3 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 139 | IB | 11 | 59 | 36 | 7 | 1 | 2 | 3 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -3 | 3 | 3 | 7 | -2 | 4 | -1 | 6 | 0 | 0 |
| 140 | RR | 12 | 58 | 34 | 7 | 1 | 2 | 4 | 1 | 2 | 5 | 3 | 2 | 2 | 9.0 | 9.8 | 0 | 1 | -3 | 5 | -1 | 2 | 3 | 5 | -1 | 1 | 0 | 8 | 0 | 0 |
| 141 | SP | 12 | 58 | 32 | 7 | 2 | 3 | 4 | 3 | 2 | 5 | 3 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -2 | 2 | -1 | 7 | 1 | 3 | 0 | 8 | 1 | 2 |
| 142 | SG | 12 | 59 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 12 | 2 | 2 | 9.0 | 10.2 | 0 | 0 | 4 | 5 | -2 | 2 | 2 | 6 | 0 | 3 | 0 | 6 | 2 | -1 |
| 143 | SK | 12 | 56 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 4 | 5 | -2 | 1 | 2 | 5 | 0 | 3 | 2 | 7 | 0 | 1 |
| 144 | AC | 12 | 59 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 5 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -3 | 5 | -1 | 2 | 0 | 6 | -2 | 3 | 1 | 8 | 1 | 1 |
| 145 | PK | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | 0 | 2 | -3 | 5 | 2 | 4 | 1 | 8 | 1 | 1 |
| 146 | DM | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 4 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 5 | 0 | 3 | 5 | 7 | 1 | 2 | 2 | 8 | -3 | 3 |
| 147 | PJ | 12 | 56 | 36 | 6 | 1 | 3 | 3 | 1 | 2 | 3 | 3 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | -2 | 0 | -2 | 6 | -2 | 3 | 2 | 6 | 1 | 1 |
| 148 | SP | 11 | 59 | 37 | 6 | 1 | 3 | 4 | 1 | 3 | 4 | 4 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | 2 | 5 | -3 | 0 | -3 | 5 | 3 | 4 | 3 | 8 | 0 | 3 |
| 149 | VS | 12 | 59 | 37 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 2 | 1 | 10.0 | 11.0 | -1 | 1 | 4 | 5 | 1 | 3 | 0 | 5 | -2 | 3 | 1 | 5 | -2 | 1 |
| 150 | NJ | 12 | 58 | 34 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | 1 | 3 | 1 | 3 | 0 | 6 | 1 | 2 | 1 | 8 | 1 | 3 |
| 151 | AM | 12 | 58 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 4 | -3 | 2 | 2 | 6 | -1 | 4 | 1 | 6 | 2 | -1 |
| 152 | KS | 12 | 59 | 36 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 4 | 1 | 2 | 10.0 | 11.2 | 0 | 1 | 3 | 3 | -3 | 2 | 0 | 5 | 0 | -1 | -1 | 8 | 1 | 1 |
| 153 | DM | 12 | 56 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 4 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | 1 | 2 | 0 | 5 | 3 | 4 | 0 | 6 | 3 | 3 |
| 154 | GM | 12 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 3 | 0 | 2 | 1 | 6 | 3 | 4 | -2 | 8 | -2 | 1 |
| 155 | AS | 12 | 58 | 34 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 7 | 2 | 2 | 9.0 | 9.9 | -1 | 1 | -1 | 5 | 0 | 2 | 2 | 4 | 2 | 1 | -3 | 8 | 3 | 3 |
| 156 | NA | 11 | 58 | 33 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 4 | 1 | 2 | 10.0 | 11.0 | -1 | 1 | -1 | 5 | 1 | 2 | -1 | 3 | 4 | 3 | 0 | 6 | 1 | 3 |
| 157 | SM | 11 | 59 | 33 | 6 | 1 | 3 | 4 | 4 | 2 | 3 | 4 | 1 | 1 | 9.0 | 9.8 | -1 | 1 | -1 | 5 | -2 | 2 | -2 | 6 | 0 | 3 | 0 | 7 | 1 | 2 |
| 158 | BM | 12 | 56 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 4 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | -3 | 3 | 0 | 2 | 3 | 5 | 0 | 3 | 0 | 3 | 3 | 3 |
| 159 | AB | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 3 | 1 | 1 | 9.0 | 10.2 | -1 | 1 | 3 | 3 | -1 | 0 | 3 | 5 | 3 | 4 | 0 | 8 | 0 | 3 |
| 160 | UP | 11 | 59 | 33 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 8 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -2 | 5 | -3 | 0 | 3 | 5 | -2 | 5 | 2 | 7 | 0 | 3 |
| 161 | AK | 12 | 59 | 35 | 6 | 1 | 3 | 3 | 1 | 3 | 5 | 3 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -1 | 3 | 0 | 0 | -2 | 6 | 2 | 2 | 1 | 8 | 1 | 2 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 162 | DK | 12 | 56 | 38 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 3 | 1 | 2 | 9.0 | 11.2 | -1 | 1 | 1 | 5 | 0 | 2 | 0 | 5 | 2 | 2 | 1 | 8 | 0 | -1 |
| 163 | SR | 12 | 59 | 41 | 7 | 1 | 3 | 4 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 11.2 | -1 | -1 | -4 | 0 | 0 | 2 | 2 | 6 | 3 | 4 | 2 | 7 | -1 | 1 |
| 164 | AJ | 12 | 59 | 41 | 7 | 1 | 3 | 3 | 1 | 2 | 3 | 4 | 2 | 2 | 9.0 | 11.6 | -1 | -1 | -2 | 5 | 0 | 3 | 3 | 7 | 2 | 1 | 2 | 6 | 3 | 3 |
| 165 | AK | 11 | 58 | 41 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 4 | 2 | 2 | 9.0 | 11.6 | -1 | 1 | 1 | 5 | -1 | 1 | 2 | 7 | 0 | 4 | 3 | 8 | 2 | 1 |
| 166 | MK | 11 | 58 | 38 | 6 | 1 | 3 | 4 | 1 | 2 | 5 | 3 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 1 | 5 | 1 | 3 | -1 | 5 | 0 | 4 | 1 | 8 | 0 | 3 |
| 167 | MM | 11 | 59 | 36 | 6 | 1 | 2 | 4 | 3 | 2 | 3 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | -1 | 1 | 5 | 1 | 3 | 3 | 7 | 0 | 3 | 1 | 6 | 1 | 1 |
| 168 | MD | 12 | 56 | 36 | 6 | 1 | 3 | 3 | 4 | 2 | 5 | 6 | 1 | 2 | 9.0 | 9.9 | -1 | 1 | 1 | 5 | -3 | 1 | 0 | 7 | -2 | 4 | 1 | 7 | -3 | 3 |
| 169 | RD | 12 | 59 | 26 | 6 | 2 | 4 | 4 | 1 | 2 | 3 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -2 | 5 | 0 | 2 | 3 | 7 | -1 | 1 | -1 | 8 | 0 | 0 |
| 170 | MP | 12 | 57 | 42 | 6 | 2 | 3 | 4 | 1 | 3 | 5 | 4 | 1 | 2 | 10.0 | 9.8 | -1 | 1 | 3 | 3 | 0 | 2 | -1 | 3 | 1 | 3 | 0 | 8 | 1 | 2 |
| 171 | PP | 12 | 58 | 42 | 6 | 2 | 3 | 3 | 1 | 2 | 5 | 3 | 2 | 2 | 9.0 | 10.0 | 0 | 1 | 3 | 3 | -3 | 3 | -1 | 7 | 0 | 3 | -2 | 8 | 2 | -1 |
| 172 | VD | 12 | 58 | 36 | 6 | 2 | 3 | 3 | 1 | 3 | 4 | 3 | 2 | 2 | 9.0 | 10.2 | 0 | 1 | -3 | 5 | -3 | 3 | 6 | 7 | 0 | 3 | -3 | 6 | 0 | 1 |
| 173 | AS | 12 | 58 | 36 | 7 | 2 | 3 | 3 | 4 | 2 | 4 | 4 | 2 | 2 | 10.0 | 10.0 | -1 | 1 | -3 | 5 | -1 | 2 | 3 | 7 | -2 | 3 | 0 | 8 | 1 | 1 |
| 174 | AD | 12 | 59 | 37 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 11.6 | -1 | 1 | 2 | 5 | -2 | 2 | 3 | 5 | 2 | 4 | 0 | 5 | 3 | 3 |
| 175 | AS | 12 | 56 | 38 | 6 | 2 | 3 | 4 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 11.8 | 0 | 1 | 4 | 5 | -2 | 2 | -1 | 7 | 1 | 2 | 0 | 8 | 0 | 0 |
| 176 | GS | 12 | 59 | 36 | 6 | 2 | 3 | 3 | 4 | 2 | 3 | 5 | 2 | 1 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | -2 | 1 | 2 | 6 | -2 | 3 | 2 | 6 | 0 | 0 |
| 177 | SD | 12 | 59 | 38 | 7 | 2 | 3 | 3 | 1 | 3 | 5 | 4 | 2 | 2 | 10.0 | 10.2 | 0 | 0 | 2 | 0 | -1 | 2 | 2 | 5 | 3 | 4 | 1 | 8 | 1 | 2 |
| 178 | KG | 12 | 59 | 38 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 5 | 1 | 2 | 9.0 | 11.8 | -1 | 1 | -3 | 5 | 0 | 2 | 0 | 6 | -2 | 3 | 1 | 6 | 2 | -1 |
| 179 | KB | 12 | 56 | 37 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 0 | 0 | 3 | -3 | 5 | 1 | 2 | 2 | 8 | 0 | 1 |
| 180 | SP | 12 | 59 | 37 | 7 | 2 | 3 | 3 | 1 | 2 | 5 | 5 | 2 | 1 | 9.0 | 11.2 | -1 | 1 | -2 | 3 | -2 | 0 | 5 | 7 | -1 | 4 | 2 | 8 | 1 | 1 |
| 181 | ML | 12 | 59 | 37 | 7 | 2 | 3 | 4 | 4 | 2 | 4 | 7 | 1 | 2 | 9.0 | 9.9 | -1 | 1 | 2 | 5 | -3 | 0 | -2 | 6 | 0 | -1 | 3 | 6 | 1 | 1 |
| 182 | SD | 12 | 58 | 37 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 8 | 1 | 2 | 9.0 | 11.2 | -1 | 1 | 2 | 5 | 1 | 3 | -3 | 5 | 3 | 4 | 1 | 7 | -3 | 3 |
| 183 | AP | 12 | 58 | 42 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 4 | 1 | 2 | 9.0 | 9.8 | -1 | 1 | 2 | 4 | 1 | 3 | 0 | 5 | 3 | 4 | 1 | 3 | 1 | 1 |
| 184 | PP | 12 | 59 | 42 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 5 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 2 | 4 | -3 | 2 | 0 | 6 | 2 | 1 | 1 | 8 | 0 | 3 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 185 | PJ | 12 | 56 | 38 | 6 | 1 | 2 | 3 | 1 | 2 | 4 | 6 | 2 | 1 | 9.0 | 10.2 | -1 | 1 | -3 | 5 | -3 | 2 | 2 | 6 | 4 | 3 | -1 | 7 | -2 | 1 |
| 186 | PS | 12 | 59 | 38 | 6 | 1 | 3 | 4 | 1 | 4 | 3 | 4 | 2 | 1 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | 1 | 2 | 0 | 5 | 0 | 3 | 0 | 8 | 1 | 3 |
| 187 | PW | 13 | 52 | 38 | 6 | 2 | 3 | 4 | 1 | 2 | 4 | 5 | 1 | 2 | 9.0 | 10.0 | 0 | 1 | -3 | 5 | 0 | 2 | 0 | 5 | 0 | 3 | -2 | 8 | 2 | -1 |
| 188 | AT | 12 | 58 | 37 | 6 | 1 | 3 | 4 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 4 | 5 | 0 | 2 | 1 | 6 | 3 | 4 | -3 | 7 | 1 | 1 |
| 189 | N | 12 | 58 | 37 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | 4 | 5 | 1 | 2 | 2 | 4 | -2 | 5 | 0 | 6 | 3 | 3 |
| 190 | AP | 12 | 59 | 36 | 7 | 1 | 3 | 4 | 5 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | -3 | 5 | -2 | 2 | -1 | 3 | 2 | 2 | 0 | 8 | -2 | 1 |
| 191 | TS | 13 | 56 | 36 | 7 | 2 | 3 | 5 | 1 | 2 | 4 | 4 | 1 | 2 | 10.0 | 11.0 | -1 | 1 | -3 | 5 | 0 | 2 | -2 | 6 | 2 | 2 | 0 | 8 | 3 | 3 |
| 192 | RK | 12 | 59 | 38 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 3 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | 2 | 5 | -1 | 0 | 3 | 5 | 3 | 4 | 2 | 6 | 1 | 3 |
| 193 | MI | 13 | 59 | 42 | 6 | 2 | 2 | 4 | 1 | 2 | 5 | 4 | 1 | 2 | 9.0 | 11.8 | -1 | 1 | -3 | 5 | -3 | 0 | 3 | 5 | 2 | 1 | 1 | 7 | 1 | 2 |
| 194 | RP | 13 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 14 | 2 | 2 | 10.0 | 10.0 | -1 | 1 | 2 | 5 | 0 | 0 | 3 | 5 | 0 | 4 | 1 | 8 | 3 | 3 |
| 195 | AP | 13 | 56 | 38 | 6 | 2 | 2 | 4 | 1 | 2 | 5 | 10 | 2 | 2 | 9.0 | 11.2 | -1 | 1 | 4 | 5 | 0 | 2 | -2 | 6 | 0 | 4 | 2 | 8 | 0 | 3 |
| 196 | PB | 12 | 59 | 36 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 4 | 2 | 2 | 9.0 | 9.9 | -1 | 1 | 1 | 3 | 0 | 2 | 0 | 5 | 0 | 3 | 2 | 8 | 0 | 3 |
| 197 | NH | 12 | 59 | 35 | 7 | 1 | 2 | 5 | 1 | 2 | 4 | 4 | 2 | 2 | 9.0 | 11.4 | -1 | 1 | 3 | 4 | 0 | 3 | 2 | 6 | -2 | 4 | 3 | 6 | 1 | 2 |
| 198 | AS | 13 | 58 | 36 | 7 | 1 | 2 | 5 | 1 | 2 | 3 | 6 | 1 | 2 | 10.0 | 9.8 | -1 | -1 | 3 | 3 | -1 | 1 | 3 | 7 | -1 | 1 | 1 | 8 | 0 | -1 |
| 199 | AM | 13 | 58 | 37 | 7 | 2 | 2 | 5 | 1 | 2 | 4 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | -1 | 3 | 3 | -2 | 0 | 2 | 7 | 1 | 3 | 1 | 5 | -1 | 1 |
| 200 | KP | 12 | 59 | 38 | 6 | 1 | 2 | 5 | 1 | 3 | 5 | 4 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | 3 | 3 | 0 | 0 | -1 | 5 | 0 | 3 | 1 | 8 | 3 | 3 |
| 201 | AP | 12 | 56 | 38 | 6 | | 3 | 4 | 5 | 2 | 3 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | -1 | 5 | 1 | 0 | 3 | 7 | 0 | 3 | -1 | 6 | 2 | 1 |
| 202 | AA | 12 | 59 | 38 | 6 | 1 | 2 | 4 | 1 | 2 | 3 | 5 | 2 | 2 | 9.0 | 11.0 | -1 | -1 | -1 | 5 | 1 | 2 | 0 | 7 | -2 | 3 | 0 | 8 | 0 | 3 |
| 203 | JM | 12 | 56 | 36 | 6 | 1 | 2 | 5 | 1 | 3 | 3 | 4 | 2 | 1 | 9.0 | 10.2 | -1 | 1 | -1 | 5 | 1 | 2 | 3 | 7 | 2 | 4 | -2 | 6 | 1 | 1 |
| 204 | RH | 12 | 59 | 35 | 6 | 1 | 3 | 4 | 5 | 2 | 5 | 8 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 3 | 0 | 2 | -1 | 3 | 1 | 2 | -3 | 8 | -3 | 3 |
| 205 | PD | 12 | 59 | 38 | 6 | 1 | 3 | 5 | 3 | 2 | 5 | 5 | 2 | 2 | 9.0 | 11.8 | -1 | 1 | 3 | 3 | 0 | 2 | -1 | 7 | -2 | 3 | 0 | 8 | 0 | 0 |
| 206 | AK | 12 | 59 | 37 | 6 | 1 | 3 | 5 | 1 | 2 | 3 | 4 | 2 | 2 | 9.0 | 11.8 | 0 | 1 | -2 | 5 | 1 | 2 | 6 | 7 | 3 | 4 | 0 | 6 | 1 | 2 |
| 207 | JJ | 12 | 56 | 36 | 6 | 1 | 3 | 5 | 5 | 2 | 5 | 5 | 2 | 1 | 9.0 | 11.0 | 0 | 1 | -1 | 3 | -2 | 2 | 3 | 7 | -2 | 3 | 0 | 7 | 2 | -1 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 208 | AK | 12 | 59 | 39 | 6 | 1 | 3 | 5 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | 1 | 5 | 0 | 2 | 3 | 5 | 1 | 2 | 2 | 3 | 0 | 1 |
| 209 | SH | 12 | 59 | 38 | 6 | 1 | 3 | 5 | 5 | 2 | 5 | 4 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | -4 | 0 | -1 | 0 | -1 | 7 | -1 | 4 | 1 | 8 | 1 | 1 |
| 210 | AM | 11 | 58 | 37 | 6 | 1 | 3 | 5 | 1 | 2 | 5 | 4 | 2 | 2 | 9.0 | 10.0 | 0 | 1 | -2 | 5 | -3 | 0 | 2 | 6 | 0 | -1 | 1 | 7 | 3 | 3 |
| 211 | SK | 12 | 58 | 37 | 6 | 1 | 3 | 5 | 3 | 2 | 4 | 3 | 1 | 1 | 9.0 | 10.0 | -1 | 1 | 1 | 5 | 0 | 0 | 2 | 5 | 3 | 4 | 2 | 8 | 0 | 0 |
| 212 | NS | 12 | 59 | 37 | 6 | 1 | 2 | 2 | 1 | 3 | 4 | 6 | 1 | 1 | 10.0 | 10.0 | 0 | 0 | 1 | 5 | 0 | 2 | 0 | 6 | 3 | 4 | 2 | 8 | 0 | 0 |
| 213 | MP | 12 | 56 | 38 | 7 | 2 | 2 | 1 | 1 | 1 | 5 | 5 | 2 | 1 | 9.0 | 11.0 | -1 | 1 | 1 | 5 | 0 | 2 | -3 | 5 | 2 | 1 | 3 | 7 | 1 | 2 |
| 214 | SA | 13 | 59 | 33 | 7 | 1 | 2 | 4 | 1 | 3 | 3 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 1 | 5 | 0 | 3 | 5 | 7 | 4 | 3 | 1 | 6 | 2 | -1 |
| 215 | PK | 11 | 56 | 40 | 7 | 1 | 2 | 2 | 1 | 1 | 3 | 7 | 2 | 2 | 10.0 | 11.0 | -1 | 1 | -2 | 5 | -1 | 1 | -2 | 6 | 0 | 3 | 1 | 8 | 0 | 1 |
| 216 | MH | 12 | 59 | 42 | 7 | 1 | 2 | 2 | 1 | 1 | 5 | 5 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 3 | -2 | 0 | -3 | 5 | 0 | 3 | 1 | 8 | 1 | 1 |
| 217 | LK | 12 | 59 | 30 | 7 | 2 | 3 | 3 | 1 | 3 | 5 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | 0 | 0 | 0 | 5 | 3 | 4 | -1 | 6 | 1 | 1 |
| 218 | YY | 13 | 59 | 30 | 7 | 2 | 2 | 1 | 1 | 1 | 5 | 8 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | -3 | 5 | 1 | 0 | 0 | 6 | -2 | 5 | 0 | 7 | -3 | 3 |
| 219 | LG | 13 | 56 | 30 | 7 | 1 | 3 | 3 | 1 | 2 | 5 | 4 | 1 | 2 | 10.0 | 11.0 | -1 | 1 | -3 | 5 | 1 | 2 | 2 | 6 | 2 | 2 | -2 | 8 | 1 | 1 |
| 220 | KS | 13 | 59 | 33 | 7 | 1 | 3 | 3 | 1 | 2 | 4 | 6 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 5 | 1 | 2 | 0 | 5 | 2 | 2 | -3 | 8 | 0 | 3 |
| 221 | VC | 12 | 59 | 32 | 7 | 1 | 2 | 2 | 1 | 3 | 5 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | 4 | 5 | 0 | 2 | 0 | 5 | 3 | 4 | 0 | 8 | -2 | 1 |
| 222 | DS | 13 | 58 | 28 | 7 | 1 | 3 | 3 | 1 | 3 | 3 | 4 | 2 | 2 | 9.0 | 11.0 | 0 | 1 | -1 | 5 | 0 | 2 | 1 | 6 | 2 | 1 | 0 | 6 | 1 | 3 |
| 223 | VS | 14 | 58 | 40 | 7 | 1 | 2 | 2 | 1 | 1 | 4 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 0 | 1 | 2 | 2 | 4 | 0 | 4 | 0 | 8 | 2 | -1 |
| 224 | GD | 13 | 59 | 34 | 7 | 1 | 2 | 2 | 1 | 1 | 4 | 6 | 1 | 2 | 9.0 | 10.2 | -1 | 1 | -3 | 5 | -2 | 2 | -1 | 3 | 0 | 4 | 0 | 5 | 1 | 1 |
| 225 | RY | 12 | 56 | 35 | 7 | 2 | 2 | 3 | 1 | 1 | 3 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 0 | 0 | 2 | -2 | 6 | 0 | 3 | 2 | 8 | 3 | 3 |
| 226 | BK | 13 | 59 | 35 | 7 | 2 | 3 | 3 | 1 | 1 | 4 | 5 | 1 | 2 | 9.0 | 9.9 | -1 | 1 | -2 | 3 | -1 | 0 | 3 | 5 | -2 | 4 | 1 | 6 | -2 | 1 |
| 227 | PZ | 12 | 56 | 34 | 7 | 2 | 3 | 3 | 1 | 3 | 5 | 4 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 2 | 5 | -3 | 0 | 3 | 5 | -1 | 1 | 1 | 8 | 3 | 3 |
| 228 | PJ | 12 | 59 | 30 | 7 | 2 | 2 | 1 | 1 | 2 | 5 | 5 | 1 | 2 | 9.0 | 9.8 | -1 | 1 | 2 | 5 | 0 | 0 | 3 | 5 | 1 | 3 | 2 | 6 | 1 | 3 |
| 229 | VK | 13 | 59 | 35 | 7 | 2 | 2 | 3 | 1 | 3 | 5 | 4 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 2 | 4 | 0 | 2 | -2 | 6 | 0 | 3 | 2 | 8 | 1 | 2 |
| 230 | SK | 13 | 59 | 40 | 7 | 1 | 3 | 3 | 1 | 3 | 4 | 4 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | 2 | 5 | 0 | 2 | 0 | 5 | 0 | 3 | 3 | 8 | 3 | 3 |

# MASTER CHART - STUDY GROUP

| Serial number | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Family size | Diet | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 231 | PY | 12 | 56 | 35 | 7 | 1 | 3 | 3 | 1 | 2 | 3 | 5 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -3 | 5 | 0 | 3 | 2 | 6 | -2 | 3 | 1 | 6 | 0 | 3 |
| 232 | SR | 13 | 59 | 40 | 7 | 2 | 2 | 2 | 1 | 1 | 5 | 5 | 2 | 1 | 9.0 | 10.0 | -1 | 1 | 2 | 5 | -1 | 1 | 3 | 7 | 3 | 4 | 1 | 7 | 0 | 3 |
| 233 | AV | 12 | 59 | 36 | 7 | 1 | 2 | 2 | 1 | 1 | 5 | 4 | 2 | 2 | 10.0 | 10.0 | -1 | -1 | 4 | 5 | -2 | 0 | 2 | 7 | 2 | 1 | 1 | 3 | 1 | 2 |
| 234 | RJ | 12 | 58 | 30 | 7 | 2 | 2 | 3 | 1 | 1 | 5 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | -1 | 1 | 3 | 0 | 0 | -1 | 5 | 0 | 4 | -1 | 8 | 0 | -1 |
| 235 | SC | 12 | 58 | 35 | 7 | 1 | 2 | 2 | 3 | 3 | 3 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 4 | 1 | 0 | 3 | 7 | 0 | 4 | 0 | 7 | -1 | 1 |
| 236 | SR | 13 | 59 | 40 | 7 | 1 | 2 | 2 | 1 | 1 | 4 | 4 | 1 | 1 | 10.0 | 10.2 | -1 | 1 | 3 | 3 | 1 | 2 | 0 | 7 | 0 | 3 | -2 | 8 | 3 | 3 |
| 237 | ST | 13 | 56 | 40 | 7 | 2 | 2 | 2 | 1 | 2 | 3 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | -1 | 3 | 3 | 1 | 2 | 3 | 7 | -2 | 4 | -3 | 8 | 2 | 1 |
| 238 | AP | 12 | 59 | 28 | 7 | 1 | 2 | 2 | 1 | 2 | 4 | 6 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | 0 | 2 | -1 | 3 | -1 | 1 | 0 | 7 | 0 | 3 |
| 239 | AS | 12 | 58 | 35 | 7 | 2 | 2 | 2 | 1 | 2 | 5 | 6 | 2 | 2 | 9.0 | 11.0 | -1 | 1 | -1 | 5 | 0 | 2 | 2 | 6 | 1 | 3 | 1 | 6 | 1 | 1 |
| 240 | JG | 12 | 48 | 30 | 7 | 1 | 2 | 3 | 1 | 2 | 3 | 6 | 2 | 1 | 10.0 | 9.9 | -1 | 1 | -1 | 5 | 1 | 2 | 3 | 7 | 0 | 3 | 1 | 8 | -3 | 3 |
| 241 | RY | 12 | 48 | 34 | 7 | 1 | 2 | 2 | 1 | 1 | 3 | 6 | 2 | 1 | 9.0 | 11.0 | 0 | 1 | -1 | 5 | -2 | 2 | 2 | 7 | 0 | 3 | 2 | 8 | 0 | 0 |
| 242 | MN | 12 | 59 | 28 | 7 | 1 | 2 | 3 | 1 | 2 | 3 | 6 | 2 | 1 | 9.0 | 9.8 | 0 | 1 | -3 | 3 | 0 | 2 | -1 | 3 | -2 | 3 | 2 | 6 | 1 | 2 |
| 243 | SD | 12 | 58 | 35 | 7 | 2 | 2 | 2 | 1 | 2 | 5 | 6 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | -1 | 0 | 2 | 6 | 3 | 4 | 3 | 7 | 2 | -1 |
| 244 | SA | 12 | 48 | 30 | 7 | 2 | 2 | 3 | 1 | 2 | 5 | 6 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | -2 | 5 | -3 | 0 | 2 | 6 | 2 | 1 | 1 | 8 | 0 | 1 |
| 245 | FS | 12 | 48 | 34 | 7 | 2 | 2 | 2 | 1 | 1 | 3 | 6 | 1 | 2 | 9.0 | 10.0 | 0 | 1 | 3 | 3 | 0 | 0 | 3 | 7 | 0 | 4 | 1 | 8 | 1 | 1 |
| 246 | BG | 13 | 56 | 40 | 7 | 2 | 2 | 3 | 1 | 2 | 5 | 7 | 2 | 2 | 9.0 | 10.0 | -1 | 1 | -1 | -1 | 0 | 2 | 2 | 7 | 0 | 4 | 1 | 8 | 3 | 3 |
| 247 | SR | 12 | 59 | 41 | 7 | 1 | 2 | 2 | 1 | 2 | 3 | 4 | 2 | 2 | 9.0 | 10.2 | -1 | 1 | -5 | -3 | 0 | 2 | -1 | 5 | 0 | 3 | -1 | 6 | 0 | 0 |
| 248 | TR | 12 | 59 | 43 | 7 | 1 | 2 | 3 | 1 | 2 | 5 | 5 | 1 | 2 | 9.0 | 11.0 | -1 | 1 | 3 | 3 | 0 | 3 | 3 | 7 | -2 | 4 | 0 | 8 | 0 | 0 |
| 249 | NK | 12 | 59 | 46 | 7 | 2 | 2 | 2 | 1 | 2 | 5 | 5 | 1 | 2 | 9.0 | 10.0 | -1 | -1 | 3 | 3 | -1 | 1 | 0 | 7 | -1 | 1 | -2 | 5 | 1 | 2 |
| 250 | SY | 12 | 56 | 38 | 7 | 1 | 2 | 3 | 1 | 3 | 4 | 6 | 1 | 2 | 9.0 | 11.0 | -1 | -1 | -1 | -1 | -2 | 0 | 3 | 7 | 1 | 3 | -3 | 8 | 2 | -1 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 1 | MG | 12 | 56 | 35 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 5 | 2 | 10.4 | 10.2 | 0 | 0 | -4 | -3 | -1 | -1 | 1 | 4 | 3 | 2 | -2 | 2 | -3 | -3 |
| 2 | PT | 12 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 5 | 2 | 9.2 | 9.0 | 0 | 0 | 5 | 5 | 0 | 0 | -1 | -1 | 3 | 3 | -1 | -1 | -1 | 2 |
| 3 | JM | 13 | 59 | 38 | 7 | 2 | 3 | 5 | 1 | 4 | 3 | 1 | 5 | 2 | 12.0 | 10.0 | 0 | 0 | 4 | 4 | -1 | 0 | 1 | 1 | 0 | 0 | 3 | 4 | -1 | -1 |
| 4 | JP | 13 | 59 | 43 | 7 | 2 | 3 | 5 | 1 | 3 | 4 | 1 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | -1 | -1 | -2 | 0 | 1 | 4 | 0 | 0 | -1 | -4 | 1 | 1 |
| 5 | RM | 13 | 58 | 44 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 2 | 4 | 2 | 9.0 | 9.9 | -1 | -1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -1 |
| 6 | ST | 12 | 58 | 42 | 7 | 1 | 3 | 5 | 1 | 4 | 3 | 2 | 5 | 2 | 10.0 | 10.0 | 0 | 0 | 5 | 4 | -3 | -3 | 2 | 4 | -1 | 0 | 1 | 5 | -3 | -3 |
| 7 | SS | 13 | 59 | 35 | 7 | 2 | 2 | 4 | 1 | 2 | 3 | 2 | 4 | 2 | 10.0 | 9.8 | -1 | 1 | 3 | 4 | -2 | -2 | 1 | 5 | 0 | 3 | 5 | 1 | 1 | 1 |
| 8 | PB | 12 | 56 | 34 | 7 | 2 | 3 | 4 | 1 | 3 | 3 | 1 | 5 | 1 | 10.8 | 10.0 | -1 | 1 | 5 | 4 | -3 | -3 | 0 | 0 | 3 | 2 | 1 | 4 | 1 | 1 |
| 9 | KK | 13 | 59 | 38 | 7 | 2 | 2 | 4 | 1 | 2 | 5 | 2 | 7 | 2 | 10.6 | 10.2 | -1 | 1 | 3 | 3 | 0 | 0 | 2 | 2 | -3 | -2 | 0 | -1 | -3 | -3 |
| 10 | ST | 12 | 59 | 43 | 7 | 2 | 2 | 2 | 1 | 2 | 5 | 2 | 4 | 2 | 10.2 | 10.0 | -1 | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 3 | 0 | 1 |
| 11 | BS | 11 | 58 | 44 | 7 | 2 | 3 | 4 | 1 | 2 | 3 | 2 | 4 | 2 | 10.8 | 10.2 | -1 | 1 | -1 | 1 | -3 | -3 | 2 | 0 | 2 | 2 | -3 | 2 | 0 | 0 |
| 12 | P | 11 | 58 | 42 | 7 | 2 | 2 | 2 | 1 | 3 | 5 | 2 | 4 | 1 | 10.0 | 10.3 | -1 | 1 | 4 | 4 | -3 | -3 | 1 | 3 | 3 | 3 | 1 | 1 | 0 | 0 |
| 13 | KG | 11 | 59 | 35 | 7 | 2 | 3 | 5 | 3 | 2 | 3 | 2 | 4 | 2 | 9.2 | 9.9 | 1 | 1 | 3 | 2 | 1 | 1 | 1 | 0 | 1 | 3 | -1 | 4 | 0 | 0 |
| 14 | DM | 12 | 56 | 34 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 1 | 4 | 2 | 9.8 | 10.0 | 0 | 1 | 3 | 4 | 0 | 0 | 1 | 0 | 2 | 2 | 3 | 1 | -1 | 0 |
| 15 | SC | 12 | 59 | 38 | 7 | 2 | 2 | 3 | 1 | 3 | 4 | 1 | 3 | 2 | 10.2 | 10.0 | -1 | 1 | 5 | 5 | 0 | 0 | -2 | 1 | -1 | -1 | -1 | 0 | -3 | -2 |
| 16 | RM | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 2 | 6 | 2 | 9.0 | 9.0 | -1 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | 1 | 0 | -2 | 2 | 3 | 3 |
| 17 | NR | 12 | 58 | 44 | 7 | 2 | 2 | 3 | 1 | 2 | 4 | 2 | 5 | 2 | 9.0 | 9.0 | 0 | 1 | 4 | 1 | -3 | -3 | 2 | 1 | 1 | 4 | 1 | 6 | 1 | 1 |
| 18 | AD | 12 | 58 | 42 | 7 | 2 | 2 | 4 | 3 | 2 | 5 | 2 | 5 | 2 | 10.0 | 10.0 | 0 | 1 | 3 | 2 | -3 | -3 | 3 | 4 | 2 | 3 | -1 | 1 | 2 | 2 |
| 19 | RB | 12 | 59 | 35 | 7 | 2 | 3 | 3 | 1 | 4 | 3 | 2 | 5 | 2 | 9.0 | 10.0 | -1 | 1 | 5 | 4 | -3 | -2 | 1 | 1 | 4 | 3 | 1 | 7 | 2 | 2 |
| 20 | BM | 11 | 56 | 34 | 7 | 1 | 2 | 4 | 4 | 2 | 3 | 2 | 4 | 1 | 9.2 | 10.8 | -1 | 1 | 1 | 1 | -3 | -3 | -2 | -3 | 3 | 3 | -1 | 0 | -3 | -3 |
| 21 | RH | 11 | 59 | 38 | 7 | 1 | 2 | 3 | 1 | 2 | 5 | 2 | 3 | 2 | 10.0 | 9.8 | -1 | 1 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | -2 | 0 | 1 | -1 | 2 |
| 22 | SB | 12 | 59 | 43 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 2 | 4 | 2 | 9.6 | 9.8 | 0 | 1 | 0 | 0 | 1 | 2 | -5 | -5 | 3 | 3 | 1 | 4 | -1 | -1 |
| 23 | DK | 12 | 58 | 44 | 7 | 1 | 3 | 5 | 1 | 4 | 4 | 2 | 5 | 2 | 9.0 | 9.8 | -1 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 2 | 2 | 1 | 1 | 1 | 1 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 24 | SM | 12 | 58 | 42 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 2 | 4 | 2 | 10.0 | 10.2 | -1 | 1 | -1 | -1 | -1 | -1 | -3 | -3 | 0 | 2 | -2 | 0 | -1 | -1 |
| 25 | RP | 11 | 59 | 35 | 7 | 1 | 3 | 3 | 1 | 2 | 4 | 1 | 3 | 2 | 10.0 | 10.2 | -1 | 1 | 3 | 3 | -2 | 0 | 4 | 4 | 2 | 2 | -1 | -1 | -3 | -3 |
| 26 | LA | 12 | 59 | 34 | 7 | 1 | 2 | 4 | 1 | 2 | 5 | 2 | 6 | 2 | 10.0 | 10.5 | -1 | 1 | -1 | -1 | -2 | 0 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 1 |
| 27 | SS | 12 | 56 | 38 | 7 | 1 | 3 | 5 | 1 | 2 | 3 | 1 | 9 | 2 | 10.2 | 10.0 | -1 | -1 | -5 | -3 | 2 | 2 | -3 | -3 | 0 | 2 | -1 | 1 | 1 | 1 |
| 28 | AB | 12 | 59 | 43 | 7 | 1 | 3 | 5 | 1 | 2 | 4 | 2 | 5 | 2 | 10.2 | 10.0 | -1 | 1 | 3 | 3 | -2 | 1 | 1 | 6 | 1 | -2 | 1 | -2 | -3 | -3 |
| 29 | RS | 12 | 59 | 44 | 7 | 2 | 3 | 5 | 1 | 3 | 4 | 2 | 6 | 1 | 10.4 | 9.0 | 1 | 1 | 2 | 4 | 1 | 1 | 0 | -1 | 1 | 3 | 1 | -1 | 0 | 1 |
| 30 | SP | 12 | 58 | 42 | 7 | 2 | 3 | 5 | 1 | 4 | 3 | 2 | 6 | 2 | 9.2 | 9.0 | 0 | 1 | 4 | 3 | -1 | -1 | -1 | -1 | 1 | -1 | 5 | 2 | 0 | 0 |
| 31 | BK | 12 | 58 | 35 | 7 | 2 | 3 | 4 | 1 | 2 | 4 | 1 | 8 | 2 | 12.0 | 12.0 | -1 | -1 | 4 | 4 | 0 | 0 | -1 | -1 | 2 | 3 | 1 | 2 | 0 | 0 |
| 32 | AP | 12 | 59 | 34 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 2 | 5 | 2 | 10.0 | 11.0 | -1 | -1 | -4 | -3 | -1 | 0 | 3 | 4 | 0 | 0 | 0 | 1 | 0 | 0 |
| 33 | RK | 12 | 56 | 38 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 1 | 5 | 1 | 9.0 | 11.0 | -1 | -1 | -1 | -1 | -2 | 0 | -1 | -1 | 1 | 2 | 0 | 2 | -1 | 0 |
| 34 | NM | 12 | 59 | 43 | 7 | 1 | 2 | 3 | 3 | 3 | 5 | 2 | 6 | 2 | 10.0 | 11.0 | -1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | -3 | 2 | -2 | -2 |
| 35 | RP | 12 | 59 | 44 | 7 | 1 | 2 | 3 | 1 | 2 | 4 | 1 | 4 | 2 | 10.0 | 11.0 | -1 | 1 | 5 | 4 | -3 | -3 | 4 | 4 | 1 | 2 | 1 | 1 | 0 | 1 |
| 36 | NS | 12 | 58 | 42 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 4 | 2 | 10.8 | 10.0 | -1 | 1 | 3 | 4 | -2 | -2 | -1 | -1 | 3 | 3 | -1 | 0 | 1 | 1 |
| 37 | ND | 11 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 4 | 5 | 1 | 4 | 2 | 10.6 | 10.6 | 0 | 1 | 5 | 4 | -3 | -3 | 2 | 4 | 4 | 3 | 3 | 3 | 1 | 1 |
| 38 | SR | 12 | 56 | 42 | 7 | 1 | 2 | 4 | 1 | 2 | 5 | 2 | 6 | 2 | 10.2 | 10.5 | -1 | 1 | 3 | 3 | 0 | 0 | 1 | 5 | 2 | 3 | -1 | 5 | 1 | 0 |
| 39 | RS | 11 | 59 | 44 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 2 | 3 | 2 | 10.8 | 10.0 | -1 | 1 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 3 | -2 | 1 | 0 | 1 |
| 40 | AI | 11 | 59 | 42 | 7 | 1 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | 1 | -1 | 1 | -3 | -3 | 2 | 2 | -1 | -1 | 1 | 1 | 2 | 1 |
| 41 | PA | 11 | 58 | 35 | 7 | 1 | 3 | 4 | 1 | 2 | 4 | 2 | 4 | 1 | 9.2 | 11.0 | -1 | 1 | 4 | 4 | -3 | -3 | 3 | 1 | 2 | 3 | -1 | 1 | 1 | 1 |
| 42 | GS | 12 | 58 | 34 | 7 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 4 | 2 | 9.8 | 10.2 | -1 | 1 | 3 | 2 | 1 | 1 | 0 | 3 | 3 | 1 | 1 | 4 | 0 | 0 |
| 43 | VS | 13 | 59 | 38 | 7 | 2 | 2 | 3 | 1 | 3 | 4 | 1 | 4 | 2 | 10.2 | 10.4 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 3 | 2 | 2 | -1 | -2 | 1 | 1 |
| 44 | SD | 11 | 56 | 43 | 7 | 1 | 3 | 4 | 3 | 3 | 4 | 2 | 5 | 2 | 9.0 | 10.8 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | -1 | 3 | 2 | 0 | 0 | -2 | -2 |
| 45 | SB | 13 | 59 | 44 | 7 | 1 | 3 | 4 | 5 | 4 | 3 | 1 | 3 | 2 | 9.0 | 10.6 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | -4 | 0 | 1 |
| 46 | RK | 12 | 59 | 42 | 7 | 2 | 2 | 4 | 1 | 1 | 3 | 2 | 5 | 2 | 10.0 | 10.0 | -1 | -1 | 4 | 1 | -3 | -3 | 0 | 0 | -1 | -1 | 1 | 4 | 1 | 1 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 47 | AS | 12 | 59 | 43 | 7 | 2 | 2 | 3 | 1 | 4 | 3 | 2 | 6 | 2 | 9.0 | 10.0 | -1 | -1 | 3 | 2 | -3 | -3 | 0 | -1 | -1 | -2 | -2 | 2 | 1 | 1 |
| 48 | RM | 12 | 56 | 43 | 7 | 2 | 3 | 4 | 1 | 2 | 4 | 2 | 4 | 2 | 9.2 | 10.2 | 0 | 0 | -5 | -3 | -3 | -2 | 4 | 2 | 3 | 3 | -1 | 2 | 1 | 1 |
| 49 | RB | 12 | 59 | 35 | 7 | 2 | 3 | 4 | 1 | 2 | 4 | 2 | 5 | 2 | 10.0 | 10.8 | -1 | -1 | 3 | 3 | -3 | -3 | -3 | 6 | -1 | -2 | 3 | 1 | 1 | 0 |
| 50 | AV | 12 | 59 | 42 | 7 | 2 | 3 | 5 | 1 | 3 | 3 | 2 | 4 | 1 | 9.6 | 10.2 | -1 | -1 | 2 | 4 | 0 | 0 | 1 | 0 | -1 | -2 | -1 | 2 | 0 | 0 |
| 51 | HB | 12 | 58 | 44 | 7 | 2 | 3 | 4 | 3 | 3 | 4 | 2 | 4 | 2 | 9.0 | 10.2 | -1 | -1 | 4 | 3 | 1 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 0 | 1 |
| 52 | GJ | 11 | 58 | 42 | 7 | 1 | 3 | 5 | 5 | 4 | 3 | 2 | 5 | 2 | 10.0 | 10.0 | -1 | -1 | 4 | 4 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 1 |
| 53 | LG | 12 | 59 | 35 | 7 | 1 | 3 | 3 | 1 | 3 | 4 | 2 | 6 | 2 | 10.0 | 10.0 | -1 | -1 | -4 | -3 | -1 | -1 | 1 | 2 | 0 | 2 | 5 | 0 | 1 | 1 |
| 54 | SM | 12 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | 5 | 1 | 10.0 | 10.0 | -1 | -1 | -1 | -1 | -2 | 0 | 2 | 1 | 1 | -2 | 1 | 3 | 0 | 0 |
| 55 | NB | 11 | 59 | 38 | 7 | 1 | 3 | 5 | 1 | 3 | 4 | 2 | 5 | 2 | 10.2 | 10.0 | 1 | 1 | 1 | 1 | -2 | 0 | 2 | 5 | 3 | 3 | 0 | 5 | 2 | 2 |
| 56 | VP | 12 | 59 | 43 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 1 | 5 | 2 | 10.2 | 10.2 | 0 | 1 | 5 | 4 | 2 | 2 | 1 | 2 | 1 | -1 | 0 | 1 | 2 | 2 |
| 57 | SG | 11 | 54 | 44 | 7 | 1 | 3 | 5 | 4 | 4 | 4 | 2 | 5 | 2 | 10.2 | 10.0 | -1 | -1 | 3 | 4 | -2 | 1 | -1 | 3 | 2 | 3 | -3 | 1 | 1 | 0 |
| 58 | SG | 12 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 3 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | 5 | 4 | 1 | 1 | 2 | 4 | 0 | 0 | 1 | 1 | -3 | -2 |
| 59 | AJ | 11 | 56 | 43 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 4 | 2 | 9.0 | 10.0 | 0 | 0 | 3 | 3 | -1 | -1 | -1 | -1 | 1 | 2 | -1 | 4 | 3 | 3 |
| 60 | LG | 12 | 59 | 43 | 7 | 1 | 3 | 4 | 1 | 2 | 4 | 2 | 5 | 2 | 9.0 | 9.9 | 0 | 1 | 4 | 4 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | -2 | 1 | 1 |
| 61 | SM | 12 | 59 | 35 | 7 | 1 | 3 | 5 | 1 | 4 | 4 | 2 | 4 | 2 | 9.0 | 10.0 | -1 | -1 | -1 | 1 | -1 | 0 | 2 | 4 | 1 | 2 | -1 | 0 | 2 | 2 |
| 62 | BN | 11 | 58 | 42 | 7 | 1 | 3 | 5 | 1 | 4 | 4 | 2 | 5 | 1 | 10.0 | 9.8 | -1 | -1 | 1 | 1 | -2 | 0 | -1 | -1 | 3 | 3 | -2 | -4 | 2 | 2 |
| 63 | GH | 13 | 58 | 44 | 7 | 1 | 3 | 5 | 1 | 4 | 5 | 1 | 3 | 2 | 10.0 | 10.0 | -1 | -1 | 5 | 4 | 0 | 0 | 2 | 4 | 1 | 3 | 1 | 4 | -3 | -3 |
| 64 | PV | 12 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 5 | 1 | 10.0 | 10.2 | 0 | 1 | 3 | 4 | -3 | -3 | 2 | 5 | 3 | 3 | -1 | 2 | -1 | 2 |
| 65 | SS | 12 | 56 | 35 | 7 | 1 | 3 | 5 | 1 | 4 | 5 | 1 | 6 | 2 | 10.0 | 10.0 | -1 | -1 | 5 | 4 | -2 | -2 | 1 | 1 | 2 | 3 | 1 | 1 | -1 | -1 |
| 66 | AS | 12 | 59 | 34 | 7 | 1 | 3 | 5 | 1 | 3 | 3 | 2 | 8 | 2 | 9.2 | 10.2 | -1 | -1 | 3 | 3 | -3 | -3 | 2 | 2 | -1 | -1 | -1 | 2 | 1 | 1 |
| 67 | KK | 12 | 59 | 38 | 7 | 1 | 3 | 5 | 3 | 3 | 4 | 1 | 4 | 2 | 10.0 | 9.8 | -1 | -1 | 4 | 4 | 0 | 0 | 3 | 1 | 2 | 3 | 0 | 2 | -1 | -1 |
| 68 | PP | 12 | 59 | 43 | 7 | 1 | 3 | 4 | 3 | 3 | 4 | 2 | 4 | 2 | 9.6 | 9.8 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 1 | -3 | -3 |
| 69 | PD | 12 | 56 | 44 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 1 | 4 | 2 | 9.0 | 10.2 | -1 | 1 | 4 | 4 | -3 | -3 | 0 | 3 | 2 | 2 | 1 | 0 | 1 | 1 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 70 | PK | 12 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 3 | 2 | 10.0 | 10.0 | -1 | -1 | 3 | 2 | -3 | -3 | 0 | -1 | 3 | 2 | -2 | 3 | 1 | 1 |
| 71 | SG | 12 | 59 | 43 | 7 | 1 | 3 | 4 | 3 | 2 | 5 | 2 | 5 | 2 | 10.0 | 10.0 | 1 | 1 | 3 | 4 | 1 | 1 | 0 | 0 | 1 | 3 | -1 | 5 | -3 | -3 |
| 72 | AJ | 13 | 58 | 43 | 7 | 2 | 3 | 5 | 1 | 3 | 4 | 2 | 4 | 2 | 10.0 | 10.0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | -1 | -1 | 3 | 1 | 0 | 1 |
| 73 | MF | 13 | 58 | 35 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 2 | 6 | 2 | 10.2 | 10.0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | -2 | -1 | 1 | 0 | 0 |
| 74 | AB | 12 | 59 | 42 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 3 | 1 | 10.2 | 10.0 | -1 | -1 | 4 | 1 | 0 | 0 | 2 | 2 | 3 | 3 | 1 | 1 | 0 | 0 |
| 75 | AP | 12 | 56 | 44 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 1 | 7 | 2 | 10.2 | 10.0 | -1 | -1 | 3 | 2 | -3 | -3 | -3 | 6 | -1 | -2 | 1 | 4 | 0 | 0 |
| 76 | NT | 13 | 59 | 42 | 7 | 2 | 3 | 3 | 3 | 2 | 4 | 2 | 5 | 2 | 10.0 | 10.0 | -1 | -1 | -5 | -3 | -3 | -3 | 2 | 0 | -1 | -2 | 5 | -2 | -1 | 0 |
| 77 | SB | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 3 | 3 | 5 | 1 | 4 | 2 | 9.0 | 10.2 | -1 | -1 | 3 | 3 | -3 | -2 | 2 | 0 | 1 | 2 | 1 | 0 | 0 | 0 |
| 78 | SP | 13 | 56 | 34 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 2 | 7 | 1 | 9.0 | 9.0 | -1 | 1 | 3 | 4 | -3 | -3 | 2 | 2 | 3 | 3 | 0 | -4 | 3 | 2 |
| 79 | VM | 12 | 58 | 38 | 7 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 4 | 2 | 9.0 | 10.0 | 0 | 1 | 5 | 4 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 4 | 1 | 1 |
| 80 | RT | 13 | 58 | 43 | 7 | 1 | 3 | 3 | 3 | 2 | 4 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | 3 | 3 | 1 | 2 | 2 | 1 | 0 | 0 | -3 | 2 | -1 | 0 |
| 81 | NH | 12 | 59 | 44 | 7 | 1 | 3 | 3 | 1 | 4 | 3 | 2 | 6 | 2 | 10.0 | 9.9 | -1 | -1 | 4 | 4 | 0 | 0 | 2 | 5 | 0 | 0 | 1 | 1 | 3 | 3 |
| 82 | AD | 12 | 56 | 42 | 7 | 1 | 3 | 4 | 3 | 2 | 4 | 2 | 5 | 2 | 10.0 | 10.0 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 2 | -1 | 0 | -1 | 2 | 1 | 1 |
| 83 | SS | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 2 | 5 | 2 | 10.0 | 9.8 | -1 | -1 | 1 | 1 | -2 | 0 | -1 | 3 | 0 | 3 | 3 | 2 | -2 | 0 |
| 84 | RT | 12 | 59 | 43 | 7 | 2 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 2 | 10.4 | 10.0 | -1 | 0 | 5 | 4 | -2 | 0 | -2 | -3 | 3 | 2 | -1 | 1 | 1 | 1 |
| 85 | KL | 12 | 59 | 35 | 7 | 2 | 3 | 4 | 1 | 4 | 3 | 2 | 12 | 2 | 9.2 | 10.2 | -1 | -1 | 3 | 4 | 2 | 2 | 3 | 3 | -3 | -2 | -2 | 0 | -3 | -3 |
| 86 | SN | 12 | 56 | 42 | 7 | 2 | 3 | 4 | 1 | 3 | 3 | 1 | 5 | 1 | 12.0 | 10.0 | 1 | 1 | 5 | 4 | -2 | 1 | -5 | -5 | 3 | 1 | 1 | 3 | 1 | 1 |
| 87 | SM | 11 | 59 | 42 | 6 | 1 | 3 | 5 | 1 | 4 | 4 | 2 | 4 | 2 | 10.0 | 9.0 | 1 | 1 | 3 | 3 | 1 | 1 | -4 | -4 | 2 | 2 | -1 | 5 | 2 | 2 |
| 88 | PL | 11 | 59 | 35 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 1 | 3 | 2 | 9.0 | 9.0 | 1 | 1 | 4 | 4 | -1 | -1 | -3 | -3 | 1 | 3 | 1 | 1 | 1 | 1 |
| 89 | RK | 11 | 58 | 40 | 6 | 1 | 3 | 5 | 1 | 4 | 3 | 2 | 4 | 2 | 10.0 | 10.0 | 0 | 0 | -1 | 1 | 0 | 0 | 1 | 4 | 2 | 3 | -1 | 1 | 3 | 3 |
| 90 | AT | 11 | 58 | 43 | 6 | 1 | 3 | 5 | 1 | 4 | 5 | 2 | 4 | 1 | 10.0 | 10.0 | 0 | 0 | 4 | 4 | -1 | 0 | 2 | 2 | 2 | 2 | 0 | 1 | -2 | -2 |
| 91 | SB | 11 | 59 | 38 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 15 | 2 | 10.8 | 10.0 | 0 | 0 | 3 | 2 | -2 | 0 | -3 | -3 | -1 | -1 | 1 | 4 | 2 | 2 |
| 92 | SD | 11 | 56 | 38 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 2 | 4 | 2 | 10.6 | 10.0 | -1 | -1 | 3 | 4 | 0 | 0 | 1 | 6 | 1 | 0 | 1 | -2 | 1 | 1 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 93 | AK | 11 | 59 | 37 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 2 | 5 | 2 | 10.2 | 10.0 | -1 | -1 | 5 | 5 | -3 | -3 | 0 | -1 | 1 | 4 | -2 | 0 | 1 | 1 |
| 94 | YM | 11 | 49 | 36 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 1 | 5 | 2 | 10.8 | 9.0 | 0 | 0 | 1 | 1 | -2 | -2 | -1 | -1 | 3 | 3 | -1 | -4 | -3 | -3 |
| 95 | SR | 11 | 58 | 43 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 2 | 4 | 2 | 10.0 | 9.0 | -1 | -1 | 4 | 1 | -3 | -3 | -1 | -1 | 2 | 3 | 3 | 4 | 0 | 1 |
| 96 | GK | 11 | 58 | 44 | 6 | 1 | 3 | 4 | 1 | 2 | 5 | 1 | 6 | 2 | 9.2 | 9.0 | -1 | -1 | 3 | 2 | 0 | 0 | 3 | 4 | 3 | 3 | -1 | 2 | 0 | 0 |
| 97 | SD | 11 | 59 | 43 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 5 | 2 | 9.8 | 10.8 | -1 | -1 | -5 | -3 | 0 | 0 | -1 | -1 | 3 | -2 | 1 | 1 | 0 | 0 |
| 98 | ST | 11 | 56 | 36 | 6 | 1 | 3 | 5 | 5 | 4 | 3 | 2 | 6 | 2 | 10.2 | 9.8 | -1 | -1 | 3 | 3 | -3 | -3 | 1 | 1 | 3 | 3 | 1 | 2 | 0 | 0 |
| 99 | SS | 11 | 59 | 36 | 6 | 1 | 3 | 3 | 3 | 3 | 5 | 2 | 5 | 1 | 9.0 | 10.0 | -1 | -1 | 3 | 4 | -3 | -3 | 1 | 4 | 2 | 2 | 5 | 2 | -1 | 0 |
| 100 | SD | 11 | 59 | 35 | 6 | 1 | 3 | 4 | 1 | 2 | 5 | 2 | 5 | 2 | 9.0 | 10.2 | -1 | -1 | 5 | 4 | 1 | 1 | -1 | -1 | 0 | 2 | 1 | 1 | -3 | -2 |
| 101 | AB | 12 | 59 | 38 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 2 | 4 | 2 | 10.0 | 10.0 | 1 | 1 | 3 | 3 | 0 | 0 | 2 | 4 | 2 | 2 | 0 | 0 | 3 | 3 |
| 102 | SS | 12 | 56 | 37 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 1 | 6 | 2 | 9.0 | 10.0 | 0 | 1 | 4 | 4 | 0 | 0 | 1 | 5 | 2 | 2 | 0 | 3 | 1 | 1 |
| 103 | SD | 13 | 59 | 38 | 7 | 2 | 3 | 4 | 3 | 2 | 4 | 2 | 4 | 1 | 9.2 | 10.0 | -1 | -1 | -1 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | -3 | 5 | 2 | 2 |
| 104 | SC | 11 | 59 | 42 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 1 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | 1 | 1 | -3 | -3 | 2 | 2 | 1 | -2 | 1 | 1 | 2 | 2 |
| 105 | SF | 12 | 58 | 39 | 6 | 1 | 3 | 2 | 1 | 3 | 3 | 2 | 4 | 2 | 9.6 | 10.2 | 0 | 0 | 5 | 4 | -3 | -3 | 3 | 1 | 3 | 3 | -1 | 1 | -3 | -3 |
| 106 | AG | 12 | 58 | 38 | 7 | 1 | 2 | 4 | 1 | 3 | 4 | 2 | 5 | 2 | 9.0 | 9.0 | 0 | 1 | 3 | 4 | -3 | -2 | 0 | 3 | 1 | -1 | 3 | 1 | -1 | 2 |
| 107 | GB | 12 | 59 | 38 | 7 | 2 | 3 | 4 | 1 | 3 | 4 | 2 | 8 | 2 | 10.0 | 10.0 | -1 | -1 | 5 | 4 | -3 | -3 | 0 | 3 | 2 | 3 | -1 | 4 | -1 | -1 |
| 108 | NS | 11 | 56 | 34 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 2 | 4 | 2 | 10.0 | 10.2 | -1 | -1 | 3 | 3 | 0 | 0 | 0 | -1 | 0 | 0 | -2 | -2 | 1 | 1 |
| 109 | KS | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 6 | 2 | 10.0 | 9.9 | -1 | -1 | 4 | 4 | 1 | 2 | 0 | 0 | 3 | 2 | 1 | 0 | -1 | -1 |
| 110 | SM | 12 | 58 | 36 | 6 | 2 | 2 | 4 | 1 | 3 | 4 | 2 | 5 | 2 | 10.2 | 10.0 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | -1 | -4 | -3 | -3 |
| 111 | PD | 12 | 58 | 38 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 2 | 6 | 1 | 10.2 | 9.8 | -1 | -1 | 4 | 4 | -1 | -1 | 0 | -1 | 1 | 2 | 1 | 4 | 1 | 1 |
| 112 | M | 12 | 59 | 42 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 2 | 4 | 2 | 10.4 | 10.0 | -1 | -1 | 3 | 2 | -2 | 0 | 4 | 2 | 3 | 3 | -1 | 2 | 1 | 1 |
| 113 | SM | 12 | 56 | 41 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 2 | 4 | 2 | 9.2 | 10.2 | -1 | -1 | 3 | 4 | -2 | 0 | -3 | 6 | 1 | 3 | 0 | -1 | -3 | -3 |
| 114 | PK | 11 | 59 | 41 | 6 | 1 | 2 | 4 | 1 | 4 | 3 | 2 | 6 | 2 | 12.0 | 10.0 | -1 | -1 | 5 | 5 | 2 | 2 | 5 | 0 | 1 | 3 | 1 | 4 | 0 | 1 |
| 115 | AK | 12 | 59 | 38 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 1 | 6 | 2 | 10.0 | 9.0 | -1 | 1 | 1 | 1 | -2 | 1 | 4 | 0 | 1 | 3 | 1 | -4 | 0 | 0 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 116 | JF | 11 | 59 | 36 | 6 | 1 | 3 | 5 | 3 | 3 | 5 | 2 | 4 | 2 | 9.0 | 9.0 | -1 | -1 | 4 | 1 | 1 | 1 | 2 | 2 | -1 | -1 | -2 | 1 | 0 | 0 |
| 117 | TP | 12 | 56 | 37 | 6 | 1 | 3 | 4 | 3 | 3 | 5 | 2 | 3 | 2 | 10.0 | 10.0 | 1 | 1 | 3 | 2 | -1 | -1 | 1 | 2 | 2 | 3 | -1 | 5 | 0 | 0 |
| 118 | K | 12 | 59 | 35 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 2 | 6 | 2 | 10.0 | 9.0 | 0 | 0 | -5 | -3 | 0 | 0 | 4 | 1 | 3 | 1 | 3 | 1 | -1 | 0 |
| 119 | RH | 11 | 59 | 35 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 2 | 8 | 2 | 10.8 | 10.2 | -1 | -1 | 3 | 3 | -1 | 0 | 2 | 5 | 2 | 2 | -1 | 4 | 0 | 1 |
| 120 | PA | 11 | 58 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 14 | 2 | 10.6 | 10.0 | -1 | -1 | 3 | 4 | -2 | 0 | 1 | 2 | 3 | 2 | 1 | -1 | 0 | 0 |
| 121 | BG | 11 | 58 | 34 | 6 | 1 | 3 | 3 | 1 | 2 | 4 | 1 | 8 | 1 | 10.2 | 10.0 | -1 | -1 | 5 | 4 | 0 | 0 | -1 | 3 | 1 | 3 | 1 | 3 | 0 | 0 |
| 122 | AS | 11 | 59 | 34 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 1 | 4 | 2 | 10.8 | 10.8 | -1 | -1 | 3 | 3 | -3 | -3 | 3 | 4 | -1 | -1 | 5 | 2 | 0 | 0 |
| 123 | DC | 11 | 56 | 36 | 6 | 1 | 2 | 4 | 1 | 3 | 3 | 2 | 4 | 2 | 10.0 | 9.9 | -1 | -1 | 4 | 4 | -2 | -2 | -1 | -1 | -1 | -2 | 1 | 1 | -1 | 0 |
| 124 | KK | 12 | 59 | 37 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 4 | 2 | 9.2 | 10.0 | -1 | 1 | -1 | 1 | -3 | -3 | 1 | 1 | 3 | 3 | 0 | 4 | 3 | 3 |
| 125 | AP | 12 | 58 | 37 | 7 | 1 | 3 | 3 | 1 | 2 | 3 | 1 | 4 | 1 | 9.8 | 9.8 | 0 | 1 | 1 | 1 | 0 | 0 | 4 | 4 | -1 | -2 | 0 | 1 | 1 | 1 |
| 126 | NN | 12 | 58 | 37 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 1 | 5 | 2 | 10.2 | 10.0 | -1 | -1 | 5 | 4 | 0 | 0 | -1 | -1 | -1 | -2 | -3 | 0 | 2 | 2 |
| 127 | KC | 12 | 59 | 37 | 7 | 1 | 2 | 3 | 1 | 2 | 5 | 1 | 11 | 2 | 9.0 | 10.2 | -1 | -1 | 3 | 4 | -3 | -3 | 2 | 4 | 2 | 2 | 1 | 2 | 2 | 2 |
| 128 | DM | 12 | 56 | 34 | 7 | 1 | 3 | 4 | 1 | 4 | 3 | 1 | 5 | 2 | 9.0 | 10.0 | -1 | -1 | 5 | 4 | -3 | -3 | 5 | 5 | 2 | 2 | -1 | 6 | -3 | -3 |
| 129 | BG | 12 | 59 | 36 | 7 | 1 | 3 | 4 | 3 | 2 | 5 | 1 | 6 | 2 | 10.0 | 11.0 | -1 | -1 | 3 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 3 | 1 | -1 | 2 |
| 130 | AS | 11 | 59 | 34 | 7 | 1 | 3 | 4 | 1 | 4 | 3 | 1 | 4 | 2 | 9.0 | 10.0 | -1 | 0 | 4 | 4 | 0 | 0 | 2 | 2 | 1 | -2 | -1 | 7 | -1 | -1 |
| 131 | DC | 11 | 59 | 35 | 6 | 1 | 3 | 2 | 1 | 2 | 4 | 1 | 4 | 2 | 9.2 | 10.0 | 0 | 0 | -1 | 1 | 0 | 0 | 3 | 1 | 3 | 3 | -2 | 0 | 1 | 1 |
| 132 | DH | 12 | 56 | 42 | 6 | 1 | 3 | 4 | 3 | 3 | 4 | 2 | 5 | 2 | 10.0 | 10.8 | 0 | 1 | 4 | 4 | 0 | 0 | 0 | 3 | 1 | -1 | 1 | 1 | -1 | -1 |
| 133 | NG | 12 | 59 | 41 | 6 | 1 | 2 | 4 | 3 | 4 | 4 | 2 | 4 | 1 | 9.6 | 10.2 | 0 | 1 | 3 | 2 | -3 | -3 | 0 | 3 | 2 | 3 | -1 | 4 | -3 | -3 |
| 134 | YG | 11 | 59 | 42 | 6 | 1 | 2 | 2 | 1 | 3 | 4 | 2 | 6 | 2 | 9.0 | 9.0 | -1 | 1 | 3 | 4 | -3 | -3 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 135 | PP | 12 | 58 | 34 | 6 | 1 | 2 | 2 | 1 | 2 | 4 | 2 | 9 | 2 | 10.0 | 10.0 | 1 | 1 | 5 | 5 | -3 | -2 | 0 | 0 | 3 | 2 | -1 | 0 | 1 | 1 |
| 136 | SD | 12 | 58 | 39 | 6 | 2 | 2 | 2 | 1 | 3 | 3 | 1 | 4 | 2 | 10.0 | 10.6 | 0 | 0 | 1 | 1 | -3 | -3 | 0 | 0 | 3 | 2 | 0 | -1 | -3 | -3 |
| 137 | MM | 11 | 59 | 38 | 6 | 1 | 3 | 2 | 1 | 3 | 3 | 1 | 4 | 2 | 10.0 | 9.9 | -1 | -1 | 4 | 1 | 0 | 0 | 0 | -1 | 3 | 2 | 1 | 2 | 0 | 1 |
| 138 | PH | 11 | 56 | 40 | 6 | 1 | 3 | 4 | 3 | 3 | 4 | 1 | 4 | 2 | 10.2 | 10.0 | 1 | 1 | 3 | 2 | 1 | 2 | 4 | 2 | 3 | 3 | 1 | 1 | 0 | 0 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 139 | P | 11 | 59 | 36 | 7 | 1 | 2 | 3 | 1 | 2 | 5 | 1 | 4 | 2 | 10.2 | 9.8 | 0 | 0 | -5 | -3 | 0 | 0 | -3 | 6 | 1 | 3 | -2 | -2 | 0 | 0 |
| 140 | RR | 12 | 58 | 34 | 7 | 2 | 3 | 4 | 1 | 2 | 5 | 2 | 3 | 1 | 10.2 | 10.0 | 0 | 0 | 3 | 3 | -1 | -1 | 5 | 0 | 2 | 3 | -1 | -1 | 0 | 0 |
| 141 | SP | 12 | 58 | 32 | 7 | 2 | 3 | 4 | 3 | 4 | 5 | 2 | 3 | 2 | 10.0 | 10.2 | 0 | 0 | 3 | 4 | -2 | 0 | 4 | 0 | 2 | 3 | 3 | 2 | -1 | 0 |
| 142 | SG | 12 | 59 | 34 | 6 | 1 | 3 | 4 | 1 | 4 | 4 | 2 | 12 | 2 | 9.0 | 10.0 | -1 | -1 | 5 | 4 | -2 | 0 | 2 | 2 | -1 | -1 | -1 | 2 | -3 | -3 |
| 143 | SK | 12 | 56 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 2 | 4 | 2 | 9.0 | 11.0 | -1 | -1 | 3 | 3 | 2 | 2 | 1 | 2 | 4 | 3 | 1 | 1 | -1 | 2 |
| 144 | AC | 12 | 59 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 2 | 5 | 2 | 9.0 | 10.0 | 0 | 0 | 4 | 4 | -2 | 1 | 4 | 1 | 3 | 1 | 1 | 2 | -1 | -1 |
| 145 | PK | 12 | 59 | 35 | 7 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 5 | 1 | 10.0 | 11.0 | -1 | -1 | -1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 5 | 2 | 1 | 1 |
| 146 | DM | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 2 | 3 | 2 | 1 | 1 | -1 | -1 |
| 147 | PJ | 12 | 56 | 36 | 6 | 1 | 3 | 3 | 1 | 2 | 3 | 1 | 3 | 2 | 10.0 | 10.2 | -1 | 0 | 1 | 1 | 0 | 0 | 4 | 1 | 1 | 3 | 0 | 0 | -3 | -3 |
| 148 | SP | 11 | 59 | 37 | 6 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | 0 | 5 | 4 | -1 | 0 | 2 | 5 | -1 | -1 | 0 | 3 | 1 | 1 |
| 149 | VS | 12 | 59 | 37 | 6 | 1 | 3 | 5 | 1 | 3 | 5 | 2 | 4 | 2 | 9.2 | 10.2 | -1 | 0 | 3 | 4 | -2 | 0 | 1 | 2 | -1 | -2 | -3 | 5 | 1 | 1 |
| 150 | NJ | 12 | 58 | 34 | 7 | 1 | 3 | 4 | 1 | 3 | 5 | 1 | 4 | 2 | 10.0 | 10.8 | -1 | -1 | 5 | 4 | 0 | 0 | -1 | 3 | 3 | 3 | 1 | 1 | -3 | -3 |
| 151 | AM | 12 | 58 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 4 | 1 | 4 | 2 | 9.6 | 9.0 | 1 | -1 | 3 | 3 | -3 | -3 | 3 | 4 | -1 | -2 | -1 | 1 | 0 | 1 |
| 152 | KS | 12 | 59 | 36 | 6 | 1 | 2 | 4 | 1 | 3 | 4 | 1 | 4 | 2 | 9.0 | 10.0 | 0 | 0 | 4 | 4 | -2 | -2 | -1 | -1 | 3 | 3 | 1 | 1 | 0 | 0 |
| 153 | DM | 12 | 56 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 1 | 4 | 2 | 10.0 | 10.6 | -1 | 1 | -1 | 1 | -3 | -3 | 1 | 1 | 1 | -1 | -1 | 4 | 0 | 0 |
| 154 | GM | 12 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 2 | 6 | 2 | 10.0 | 9.9 | -1 | 1 | 4 | 4 | 0 | 0 | 4 | 4 | 2 | 3 | 3 | -2 | 0 | 0 |
| 155 | AS | 12 | 58 | 34 | 6 | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 7 | 2 | 10.0 | 10.0 | 0 | 1 | 3 | 2 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | 0 | -1 | 0 |
| 156 | NA | 11 | 58 | 33 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 1 | 4 | 2 | 10.2 | 9.8 | 0 | 1 | 3 | 4 | -3 | -3 | 2 | 4 | 3 | 2 | -2 | -4 | -3 | -2 |
| 157 | SM | 11 | 59 | 33 | 6 | 1 | 3 | 4 | 4 | 4 | 3 | 1 | 4 | 1 | 10.2 | 10.0 | -1 | 1 | 5 | 5 | -3 | -3 | 5 | 5 | 3 | 2 | 1 | 4 | 3 | 3 |
| 158 | BM | 12 | 56 | 34 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | 4 | 2 | 10.2 | 10.2 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | -1 | 2 | 1 | 1 |
| 159 | AB | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 1 | 2 | 3 | 1 | 3 | 2 | 10.0 | 10.0 | -1 | 1 | 4 | 1 | 0 | 0 | 2 | 2 | 3 | 3 | 1 | 2 | 2 | 2 |
| 160 | UP | 11 | 59 | 33 | 6 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | 8 | 2 | 9.0 | 10.0 | 0 | 1 | 3 | 2 | 0 | 0 | 3 | 1 | 1 | 3 | -1 | 1 | 2 | 2 |
| 161 | AK | 12 | 59 | 35 | 6 | 1 | 3 | 3 | 1 | 3 | 5 | 1 | 3 | 1 | 9.0 | 9.0 | -1 | 1 | -5 | -3 | 0 | 0 | 0 | 3 | 1 | 3 | 0 | 2 | -3 | -3 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 162 | DK | 12 | 56 | 38 | 6 | 1 | 3 | 4 | 1 | 4 | 3 | 1 | 3 | 2 | 9.0 | 9.0 | -1 | 1 | 3 | 3 | -3 | -3 | 0 | 3 | 1 | 3 | 1 | 2 | -1 | 2 |
| 163 | SR | 12 | 59 | 41 | 7 | 2 | 3 | 4 | 1 | 3 | 3 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | 1 | 3 | 4 | -3 | -3 | 0 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| 164 | AJ | 12 | 59 | 41 | 7 | 2 | 3 | 3 | 1 | 2 | 3 | 2 | 4 | 2 | 10.0 | 10.2 | -1 | -1 | 5 | 4 | -3 | -2 | 0 | 0 | -2 | 3 | -2 | 0 | 1 | 1 |
| 165 | AK | 11 | 58 | 41 | 7 | 1 | 3 | 3 | 1 | 3 | 4 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | 1 | 3 | 3 | -3 | -3 | 0 | 0 | 3 | 1 | -1 | 3 | -1 | -1 |
| 166 | MK | 11 | 58 | 38 | 6 | 1 | 3 | 4 | 1 | 4 | 3 | 2 | 3 | 2 | 10.0 | 10.6 | -1 | -1 | 4 | 4 | 0 | 0 | 0 | -1 | 2 | 2 | 3 | 5 | -3 | -3 |
| 167 | MM | 11 | 59 | 36 | 6 | 1 | 3 | 4 | 3 | 2 | 3 | 1 | 4 | 2 | 10.4 | 9.9 | 1 | 1 | -1 | 1 | 1 | 2 | 4 | 2 | 3 | 2 | -1 | 1 | 1 | 1 |
| 168 | MD | 12 | 56 | 36 | 6 | 2 | 3 | 3 | 4 | 2 | 3 | 1 | 6 | 2 | 9.2 | 10.0 | 0 | 0 | 1 | 1 | 0 | 0 | -3 | 6 | 1 | 3 | 1 | 1 | 1 | 1 |
| 169 | RD | 12 | 59 | 26 | 6 | 2 | 3 | 4 | 1 | 4 | 3 | 1 | 5 | 1 | 12.0 | 9.8 | -1 | -1 | 5 | 4 | -1 | -1 | 5 | 0 | -1 | -1 | 1 | 1 | -3 | -3 |
| 170 | MP | 12 | 57 | 42 | 6 | 2 | 3 | 4 | 1 | 3 | 3 | 1 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | 3 | 4 | -2 | 0 | 4 | 0 | -1 | -2 | 5 | 4 | 0 | 1 |
| 171 | PP | 12 | 58 | 42 | 6 | 2 | 3 | 3 | 1 | 2 | 5 | 2 | 3 | 2 | 9.0 | 10.2 | -1 | -1 | 5 | 4 | -2 | 0 | -1 | -1 | 3 | 3 | 1 | -2 | 0 | 0 |
| 172 | VD | 12 | 58 | 36 | 6 | 1 | 3 | 3 | 1 | 3 | 4 | 2 | 3 | 2 | 10.0 | 10.0 | -1 | -1 | 3 | 3 | 2 | 2 | 2 | 4 | -1 | -2 | 0 | 0 | 0 | 0 |
| 173 | AS | 12 | 58 | 36 | 7 | 1 | 3 | 3 | 4 | 4 | 4 | 2 | 4 | 2 | 10.0 | 10.6 | -1 | -1 | 4 | 4 | -2 | 1 | 5 | 5 | 3 | 2 | 0 | -4 | 0 | 0 |
| 174 | AD | 12 | 59 | 37 | 7 | 1 | 3 | 4 | 1 | 2 | 5 | 2 | 4 | 2 | 10.8 | 10.4 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | -3 | 4 | -1 | 0 |
| 175 | AS | 12 | 56 | 38 | 6 | 1 | 3 | 4 | 1 | 3 | 3 | 2 | 4 | 2 | 10.6 | 10.8 | 0 | 1 | 4 | 4 | -1 | -1 | 2 | 2 | -1 | -1 | 1 | 2 | -2 | -2 |
| 176 | GS | 12 | 59 | 36 | 6 | 1 | 3 | 3 | 4 | 4 | 3 | 2 | 5 | 2 | 10.2 | 10.2 | -1 | -1 | 3 | 2 | 0 | 0 | 3 | 1 | -1 | -2 | -1 | 1 | 0 | 1 |
| 177 | SD | 12 | 59 | 38 | 7 | 1 | 3 | 3 | 1 | 3 | 3 | 2 | 4 | 2 | 10.8 | 9.0 | -1 | 1 | 3 | 4 | -1 | 0 | 0 | 3 | 3 | 3 | 1 | 2 | 1 | 1 |
| 178 | KG | 12 | 59 | 38 | 7 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | 5 | 2 | 10.0 | 10.0 | -1 | 1 | 5 | 5 | -2 | 0 | 0 | 3 | -1 | -2 | -1 | 2 | 1 | 1 |
| 179 | KB | 12 | 56 | 37 | 7 | 1 | 3 | 4 | 1 | 4 | 4 | 2 | 4 | 2 | 9.2 | 10.6 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | 3 | 3 | 3 | 1 | 1 | 0 |
| 180 | SP | 12 | 59 | 37 | 7 | 1 | 3 | 3 | 1 | 4 | 4 | 2 | 5 | 2 | 9.8 | 9.9 | -1 | 1 | 4 | 1 | -3 | -3 | 0 | 0 | 1 | -1 | -1 | 0 | 0 | 1 |
| 181 | ML | 12 | 59 | 37 | 7 | 1 | 3 | 4 | 4 | 2 | 4 | 1 | 7 | 2 | 10.2 | 10.2 | 0 | 1 | 3 | 2 | -2 | -2 | 0 | 0 | 2 | 3 | -2 | 3 | 2 | 1 |
| 182 | SD | 12 | 58 | 37 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 1 | 8 | 2 | 9.0 | 9.8 | 0 | 1 | -5 | -3 | -3 | -3 | 0 | -1 | 0 | 0 | 1 | 5 | 1 | 1 |
| 183 | AP | 12 | 58 | 42 | 6 | 2 | 3 | 4 | 1 | 3 | 3 | 1 | 4 | 2 | 9.0 | 10.0 | 0 | 1 | 3 | 3 | 0 | 0 | 4 | 2 | 3 | 2 | -1 | 1 | 0 | 0 |
| 184 | PP | 12 | 59 | 42 | 6 | 2 | 3 | 4 | 1 | 2 | 4 | 1 | 5 | 1 | 10.0 | 10.2 | 0 | 1 | 3 | 4 | 0 | 0 | -3 | 6 | 3 | 2 | 1 | 1 | 1 | 1 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 185 | PJ | 12 | 56 | 38 | 6 | 2 | 2 | 3 | 1 | 2 | 4 | 2 | 6 | 2 | 9.0 | 10.0 | 0 | 0 | 5 | 4 | -3 | -3 | 5 | 0 | 3 | 2 | -1 | 1 | -2 | -2 |
| 186 | PS | 12 | 59 | 38 | 6 | 2 | 3 | 5 | 1 | 4 | 3 | 2 | 4 | 2 | 9.2 | 10.0 | 0 | 0 | 3 | 3 | -3 | -3 | 4 | 0 | 3 | 3 | 0 | 4 | 0 | 1 |
| 187 | PW | 13 | 52 | 38 | 6 | 2 | 3 | 4 | 1 | 2 | 4 | 1 | 5 | 2 | 10.0 | 10.0 | -1 | -1 | 4 | 4 | 1 | 1 | 2 | 2 | 4 | 3 | 1 | -2 | 1 | 1 |
| 188 | AT | 12 | 58 | 37 | 6 | 2 | 3 | 4 | 1 | 2 | 4 | 1 | 4 | 1 | 9.6 | 10.2 | -1 | -1 | -1 | 1 | 0 | 0 | 1 | 2 | 4 | 3 | 1 | 0 | 1 | 1 |
| 189 | N | 12 | 58 | 37 | 7 | 1 | 3 | 5 | 1 | 2 | 3 | 1 | 4 | 2 | 9.0 | 10.2 | 0 | 0 | 1 | 1 | 0 | 0 | 4 | 1 | 4 | 3 | -2 | -4 | 1 | 1 |
| 190 | AP | 12 | 59 | 36 | 7 | 1 | 3 | 5 | 5 | 4 | 5 | 1 | 4 | 2 | 10.0 | 11.0 | -1 | -1 | -4 | -3 | 0 | 0 | 2 | 2 | -1 | -1 | -1 | 4 | 1 | 0 |
| 191 | TS | 13 | 56 | 36 | 7 | 2 | 3 | 5 | 1 | 4 | 4 | 1 | 4 | 2 | 10.0 | 10.2 | -1 | -1 | 5 | 5 | -3 | -3 | 1 | 2 | 4 | 3 | 3 | 2 | 0 | 0 |
| 192 | RK | 12 | 59 | 38 | 7 | 1 | 3 | 4 | 1 | 2 | 3 | 1 | 3 | 2 | 10.0 | 9.0 | -1 | -1 | 4 | 4 | -3 | -3 | 4 | 1 | 3 | 1 | -1 | 1 | 0 | 1 |
| 193 | MI | 13 | 59 | 42 | 6 | 2 | 2 | 4 | 1 | 2 | 2 | 1 | 4 | 2 | 10.2 | 10.0 | -1 | -1 | -1 | -1 | -3 | -2 | 2 | 5 | 2 | 2 | 1 | 2 | 2 | 1 |
| 194 | RP | 13 | 59 | 42 | 7 | 2 | 3 | 4 | 1 | 3 | 5 | 2 | 14 | 2 | 10.2 | 10.8 | -1 | -1 | 1 | 1 | -3 | -3 | 1 | 2 | 3 | 2 | 1 | 2 | 1 | 1 |
| 195 | AP | 13 | 56 | 38 | 6 | 2 | 2 | 4 | 1 | 2 | 5 | 2 | 10 | 2 | 10.4 | 9.9 | -1 | -1 | 5 | 4 | 0 | 0 | -1 | 3 | 1 | 3 | 5 | 1 | 0 | 0 |
| 196 | PB | 12 | 59 | 36 | 7 | 2 | 3 | 4 | 1 | 4 | 3 | 2 | 4 | 1 | 9.2 | 9.2 | 1 | 1 | 3 | 4 | 1 | 2 | 2 | 2 | -1 | -1 | 1 | 0 | 0 | 0 |
| 197 | NH | 12 | 59 | 35 | 7 | 2 | 3 | 5 | 1 | 4 | 4 | 2 | 4 | 2 | 12.0 | 9.8 | 0 | 1 | 5 | 4 | 0 | 0 | 3 | 1 | -1 | -2 | 0 | 3 | 0 | 0 |
| 198 | AS | 13 | 58 | 36 | 7 | 2 | 3 | 5 | 1 | 4 | 3 | 1 | 6 | 2 | 10.0 | 10.0 | -1 | -1 | 3 | 3 | -1 | -1 | 0 | 3 | 3 | 3 | 0 | 5 | -1 | 0 |
| 199 | AM | 13 | 58 | 37 | 7 | 2 | 3 | 5 | 1 | 4 | 4 | 1 | 4 | 2 | 9.0 | 10.2 | -1 | -1 | 4 | 4 | -2 | 0 | 0 | 3 | -1 | -2 | -3 | 1 | -2 | -2 |
| 200 | KP | 12 | 59 | 38 | 6 | 2 | 3 | 5 | 1 | 3 | 5 | 1 | 4 | 2 | 10.0 | 10.0 | 0 | 0 | -1 | 1 | -2 | 0 | 0 | -1 | 4 | 3 | 1 | 1 | 0 | 1 |
| 201 | AP | 13 | 56 | 38 | 6 | 1 | 3 | 4 | 5 | 2 | 3 | 1 | 4 | 2 | 10.0 | 10.0 | 0 | 1 | 4 | 4 | 2 | 2 | 0 | 0 | 2 | 3 | -1 | 1 | 1 | 1 |
| 202 | AA | 12 | 59 | 38 | 6 | 2 | 3 | 4 | 1 | 2 | 3 | 2 | 5 | 2 | 10.8 | 10.2 | -1 | -1 | 3 | 2 | -2 | 1 | 0 | 0 | 2 | 3 | 1 | 4 | 1 | 1 |
| 203 | JM | 12 | 56 | 36 | 6 | 2 | 3 | 5 | 1 | 3 | 3 | 2 | 4 | 2 | 10.6 | 10.0 | -1 | -1 | 3 | 4 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | -2 | 1 | 0 |
| 204 | RH | 12 | 59 | 35 | 6 | 2 | 3 | 4 | 5 | 4 | 1 | 2 | 8 | 1 | 10.2 | 9.0 | -1 | -1 | 5 | 5 | -1 | -1 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 |
| 205 | PD | 12 | 59 | 38 | 6 | 1 | 3 | 5 | 3 | 4 | 1 | 2 | 5 | 2 | 10.8 | 9.0 | 0 | 1 | 1 | 1 | 0 | 0 | -3 | 6 | 3 | 1 | -1 | -4 | 2 | 1 |
| 206 | AK | 12 | 59 | 37 | 6 | 1 | 3 | 5 | 1 | 2 | 3 | 2 | 4 | 2 | 10.0 | 10.6 | -1 | -1 | 4 | 1 | -1 | 0 | 5 | 0 | 2 | 2 | -2 | 4 | 1 | 1 |
| 207 | JJ | 12 | 56 | 36 | 6 | 1 | 3 | 5 | 5 | 4 | 2 | 2 | 5 | 2 | 9.2 | 10.2 | -1 | 0 | 3 | 2 | -2 | 0 | 4 | 0 | 3 | 2 | 1 | 2 | 0 | 0 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 208 | AK | 12 | 59 | 39 | 6 | 1 | 3 | 5 | 1 | 3 | 3 | 2 | 4 | 2 | 9.8 | 10.2 | -1 | 0 | 5 | 4 | 0 | 0 | 2 | 2 | 1 | 3 | -1 | 1 | 1 | 1 |
| 209 | SH | 12 | 59 | 38 | 6 | 1 | 3 | 5 | 5 | 4 | 5 | 1 | 4 | 2 | 10.2 | 10.0 | -1 | 0 | 1 | 1 | -3 | -3 | 1 | 2 | -1 | -1 | 1 | 2 | -2 | -2 |
| 210 | AM | 11 | 58 | 37 | 6 | 1 | 3 | 5 | 1 | 2 | 2 | 2 | 4 | 2 | 9.0 | 10.0 | -1 | -1 | 0 | 0 | -2 | -2 | 4 | 1 | -1 | -2 | -1 | 2 | 0 | 1 |
| 211 | SK | 12 | 58 | 37 | 6 | 1 | 3 | 5 | 3 | 4 | 4 | 1 | 3 | 2 | 9.0 | 10.0 | -1 | -1 | 0 | 0 | -3 | -3 | 2 | 2 | 3 | 3 | 0 | 1 | 1 | 1 |
| 212 | NS | 12 | 59 | 37 | 6 | 1 | 2 | 2 | 1 | 3 | 4 | 1 | 6 | 2 | 10.0 | 11.0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | -1 | -2 | 1 | 0 | 1 | 1 |
| 213 | MP | 12 | 56 | 38 | 7 | 1 | 2 | 2 | 1 | 1 | 5 | 2 | 5 | 2 | 9.0 | 10.0 | 0 | 1 | -1 | -1 | 0 | 0 | 4 | 1 | 3 | 2 | 1 | 3 | 1 | 1 |
| 214 | SA | 13 | 59 | 33 | 7 | 2 | 2 | 4 | 1 | 3 | 3 | 1 | 5 | 2 | 9.2 | 11.0 | -1 | 1 | 3 | 3 | -3 | -3 | 2 | 5 | 1 | 3 | -2 | 5 | 1 | 0 |
| 215 | PK | 11 | 56 | 40 | 7 | 1 | 2 | 2 | 1 | 1 | 3 | 2 | 7 | 2 | 10.0 | 11.0 | -1 | 1 | -1 | -1 | -3 | -3 | 1 | 2 | -1 | -1 | -1 | 1 | 0 | 0 |
| 216 | MH | 12 | 59 | 42 | 7 | 1 | 2 | 2 | 1 | 1 | 5 | 2 | 5 | 2 | 9.6 | 10.0 | -1 | 1 | -5 | -3 | 1 | 1 | -1 | 3 | -1 | -2 | 3 | 1 | 0 | 1 |
| 217 | LK | 12 | 59 | 30 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 1 | 5 | 2 | 9.0 | 10.8 | -1 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | 1 | 2 | 1 |
| 218 | YY | 13 | 59 | 30 | 7 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 8 | 2 | 10.0 | 9.0 | -1 | 1 | 3 | 4 | 0 | 0 | 0 | -1 | -1 | -2 | 1 | 4 | 1 | 1 |
| 219 | LG | 13 | 56 | 30 | 7 | 2 | 3 | 3 | 1 | 2 | 5 | 1 | 4 | 2 | 10.0 | 9.0 | -1 | 1 | 5 | 4 | 0 | 0 | 4 | 2 | 3 | 3 | 1 | -2 | -3 | -3 |
| 220 | KS | 13 | 59 | 33 | 7 | 2 | 3 | 3 | 1 | 2 | 4 | 1 | 6 | 1 | 10.0 | 11.0 | 0 | 1 | 3 | 3 | -3 | -3 | -3 | 6 | 1 | -1 | 5 | 0 | -1 | 2 |
| 221 | VC | 12 | 59 | 32 | 7 | 1 | 2 | 2 | 1 | 3 | 5 | 2 | 6 | 2 | 10.2 | 11.0 | -1 | 1 | 4 | 4 | -3 | -3 | 5 | 0 | 2 | 3 | 1 | -4 | -1 | -1 |
| 222 | DS | 13 | 58 | 28 | 7 | 2 | 3 | 3 | 1 | 3 | 3 | 2 | 4 | 2 | 10.2 | 11.0 | -1 | 1 | -1 | 1 | -3 | -2 | 4 | 0 | 0 | 0 | 0 | 4 | 1 | 1 |
| 223 | VS | 11 | 58 | 40 | 7 | 1 | 2 | 2 | 1 | 1 | 4 | 1 | 4 | 2 | 10.2 | 10.2 | -1 | 1 | 4 | 4 | -3 | -3 | 2 | 2 | 3 | 2 | 0 | 4 | -1 | -1 |
| 224 | GD | 11 | 59 | 34 | 7 | 1 | 2 | 2 | 1 | 1 | 4 | 1 | 6 | 1 | 10.0 | 10.8 | -1 | 1 | 3 | 2 | 0 | 0 | 1 | 2 | 3 | 2 | -3 | 2 | -3 | -3 |
| 225 | RY | 11 | 56 | 35 | 7 | 1 | 2 | 3 | 1 | 1 | 3 | 1 | 4 | 2 | 9.0 | 9.9 | -1 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | 3 | 2 | 1 | 1 | 1 | 1 |
| 226 | BK | 11 | 59 | 35 | 7 | 2 | 3 | 3 | 1 | 1 | 4 | 1 | 5 | 2 | 9.0 | 10.0 | 1 | 1 | 5 | 5 | 0 | 0 | 2 | 2 | 3 | 3 | -1 | 2 | 1 | 1 |
| 227 | PZ | 11 | 56 | 34 | 7 | 1 | 3 | 3 | 1 | 3 | 5 | 1 | 4 | 2 | 9.0 | 9.8 | 0 | 1 | 1 | 1 | -1 | -1 | 1 | 2 | 0 | 0 | 1 | 2 | -3 | -3 |
| 228 | PJ | 11 | 59 | 30 | 7 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 5 | 2 | 10.0 | 10.0 | -1 | 1 | 4 | 1 | -2 | 0 | 4 | 1 | -1 | 0 | -1 | 1 | 0 | 1 |
| 229 | VK | 11 | 59 | 35 | 7 | 1 | 2 | 3 | 1 | 3 | 5 | 1 | 4 | 2 | 10.0 | 10.2 | -1 | 0 | 3 | 2 | -2 | 0 | 2 | 5 | 0 | 3 | 3 | 0 | 0 | 0 |
| 230 | SK | 13 | 59 | 40 | 7 | 1 | 3 | 3 | 1 | 3 | 4 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | 1 | 5 | 4 | 2 | 2 | 1 | 2 | 3 | 2 | -1 | 3 | 0 | 0 |

# MASTER CHART - CONTROL GROUP

| Sl. No. | Name | Age (Years) | Height (Inches) | Weight (Kg) | Standard | Attainment of menarche | Edn | | Occ | | Socio economic status | Diet | Family size | Worms | Hb (gm%) | | Questionnaire | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | Def | | Knowledge About anaemia | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Basics | | Causes | | Signs & Symptoms | | Treatment | | Prevention | | Complications | |
| | | | | | | | Mother | Father | Mother | Father | | | | | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test | Pretest | Post Test |
| 231 | PY | 11 | 56 | 35 | 7 | 1 | 3 | 3 | 1 | 2 | 3 | 2 | 5 | 2 | 10.0 | 10.0 | -1 | 1 | 1 | 1 | -2 | 1 | -1 | 3 | -3 | -2 | -2 | 5 | 0 | 0 |
| 232 | SR | 13 | 59 | 40 | 7 | 2 | 2 | 2 | 1 | 1 | 5 | 2 | 5 | 1 | 9.2 | 10.0 | -1 | 1 | 0 | 0 | 1 | 1 | 4 | 1 | 3 | 1 | 1 | 1 | -1 | 0 |
| 233 | AV | 13 | 59 | 36 | 7 | 1 | 2 | 2 | 1 | 1 | 5 | 2 | 4 | 2 | 10.0 | 10.0 | -1 | -1 | 0 | 0 | -1 | -1 | 2 | 5 | 2 | 2 | -1 | 1 | -3 | -2 |
| 234 | RJ | 11 | 58 | 30 | 7 | 1 | 2 | 3 | 1 | 1 | 5 | 1 | 5 | 2 | 9.6 | 10.0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 1 | 1 | 3 | 3 |
| 235 | SC | 11 | 58 | 35 | 7 | 1 | 2 | 2 | 3 | 3 | 3 | 1 | 5 | 2 | 9.0 | 10.2 | -1 | 1 | -1 | -1 | -1 | 0 | -1 | 3 | 4 | 3 | -1 | 4 | 1 | 1 |
| 236 | AA | 13 | 59 | 40 | 7 | 2 | 2 | 2 | 1 | 1 | 4 | 1 | 4 | 2 | 10.0 | 9.0 | -1 | 1 | 3 | 3 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | -3 | -3 |
| 237 | SR | 11 | 56 | 40 | 7 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 5 | 2 | 10.0 | 10.0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 1 | 0 | -1 | 2 |
| 238 | SS | 13 | 59 | 28 | 7 | 1 | 2 | 2 | 1 | 2 | 4 | 2 | 6 | 2 | 10.0 | 10.0 | -1 | -1 | -5 | -3 | -3 | -3 | 4 | 2 | 1 | 0 | 1 | -4 | -1 | -1 |
| 239 | SY | 13 | 58 | 35 | 7 | 1 | 2 | 2 | 1 | 2 | 5 | 2 | 6 | 2 | 10.2 | 9.9 | -1 | -1 | 3 | 3 | -2 | -2 | -3 | 6 | 1 | 4 | -2 | 4 | 1 | 1 |
| 240 | ND | 11 | 48 | 30 | 7 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | 6 | 2 | 10.2 | 10.0 | 1 | 1 | 1 | 1 | -3 | -3 | 5 | 0 | 2 | 3 | -1 | 2 | -1 | -1 |
| 241 | VS | 11 | 48 | 34 | 7 | 1 | 2 | 2 | 1 | 1 | 3 | 2 | 6 | 2 | 10.2 | 9.8 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 3 | 3 | 1 | -3 | -3 |
| 242 | KM | 11 | 56 | 40 | 7 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | 7 | 1 | 10.0 | 10.0 | -1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 3 | -1 | 0 | 1 | 1 |
| 243 | PK | 13 | 59 | 41 | 7 | 2 | 2 | 2 | 1 | 2 | 5 | 2 | 4 | 2 | 9.0 | 10.2 | -1 | 1 | 0 | 0 | -3 | -3 | 1 | 2 | 2 | -2 | 1 | 3 | 1 | 1 |
| 244 | US | 13 | 59 | 43 | 7 | 2 | 2 | 2 | 1 | 2 | 4 | 2 | 5 | 2 | 9.0 | 10.0 | -1 | 1 | -1 | -1 | -3 | -3 | 4 | 1 | 2 | 3 | 1 | 5 | -3 | -3 |
| 245 | AK | 11 | 59 | 46 | 7 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 5 | 2 | 9.0 | 10.0 | -1 | 1 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 2 | 5 | 1 | 0 | 1 |
| 246 | KK | 11 | 56 | 38 | 7 | 1 | 2 | 3 | 1 | 3 | 5 | 2 | 6 | 1 | 10.0 | 10.2 | -1 | 1 | -1 | -1 | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 1 | 0 | 0 |
| 247 | JT | 11 | 59 | 40 | 7 | 1 | 2 | 2 | 1 | 3 | 3 | 2 | 6 | 2 | 10.0 | 9.0 | -1 | 1 | -5 | -3 | 0 | 0 | 4 | 1 | 2 | 2 | 0 | 1 | 0 | 0 |
| 248 | SS | 11 | 59 | 44 | 7 | 1 | 2 | 2 | 1 | 3 | 4 | 1 | 5 | 2 | 10.0 | 10.0 | 0 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 0 | 0 |
| 249 | SP | 11 | 58 | 42 | 7 | 1 | 2 | 2 | 1 | 2 | 4 | 1 | 6 | 2 | 10.0 | 10.0 | -1 | 1 | 3 | 3 | -3 | -3 | 0 | -1 | 0 | 2 | -3 | -2 | -1 | 0 |
| 250 | SS | 13 | 58 | 32 | 7 | 2 | 2 | 2 | 1 | 3 | 4 | 1 | 5 | 2 | 10.4 | 9.9 | -1 | 0 | -1 | -1 | -3 | -3 | 4 | 2 | 1 | -2 | 1 | 0 | -3 | -2 |

# ANNEXURE IV - KEY TO MASTER CHART

Attainment of menarche

Not Attained -1

Attained-2

Diet history-

Non Vegetarian-1

Vegetarian-2

Education of father/mother

| | |
|---|---|
| Illiterate | 1 |
| Primary | 2 |
| Secondary | 3 |
| Graduate | 4 |
| Post graduate | 5 |

History of passing of worms

History of passing of worms -1

No history of passing of worms-2

Occupation of father

| | |
|---|---|
| Daily wages | 1 |
| Business | 2 |
| Service | 3 |
| Professional | 4 |

Occupation of mother

House wife 1

Daily wages 2

Service 3

Business 4

Professional – 5

Socio-economic status

Upper high-1

High-2

Upper middle-3

Lower middle-4

Poor-5

Very poor -6

| | | |
|---|---|---|
| Def | - | Definition |
| Edn | - | Education |
| gm | - | Gram |
| Hb | - | Haemoglobin |
| Kg | - | Kilograms |
| Occ | - | Occupation |
| Sl. No. | - | Serial Number |