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A study on consequences and prevalence of anemia among college going girls (18-22Years) of Sultanpur city

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Abstract
The present study was investigated in sultanpur city of Uttar Pradesh during the session of September-January, 2016-2017. The aim of the research was to find out the impact on Consequences and prevalence of anaemia among adolescent girls living in Sultanpur city. Hundred girls were randomly selected from different age groups and self- constructed questionnaire was used to find the impact of consequences and prevalence of anaemia among adolescent girls, with respect to their dietary patterns, family background, family income, environmental living to enhance the physical appearance and BMI (Body mass index) to the height and weight. Data were analyzed in terms of frequency and percentage. Finding revealed that 18% respondents were anaemic having pale conjunctiva, spoon shape nail bed pallor of skin, angular stomatitis and white patches in the face enhanced physical appearance and anthropometric measurement for the causes which observed through the anaemia. Adolescence is a transitional age of physical and psychological human development generally between puberty and legal adulthood. Adolescence is a second phase of life. It is "coming of age" as children grow into adult physically, mentally and socially. Adolescent girls are at a high risk for anaemia and malnutrition. Inadequate nutrition during adolescence can have serious consequences throughout the reproductive years of life and beyond. Very often, in India, girls get married and pregnant even before the growth period is over, thus doubling the risk for anaemia. The nutritional anaemia in adolescent girls attributes to the high maternal mortality rate, the high incidence of low birth weight babies, high perinatal mortality and the consequent high fertility rates.

Keywords: Adolescents, anaemia, BMI

Introduction
Good health is an invaluable asset for better economic productivity, both at individual and national level, but above all; it is valued for those who own it as a prerequisite for a better quality of life and better standards of living. Nutrition is significant determinant of good health & the incidence of mal nutrition & under nutrition in the community affects certain indicators such as IMR & MMR adversely. Anemia is the most prevalent nutritional problem worldwide and it is mainly caused due to iron deficiency. Its prevalence is highest among young children and women of childbearing age; particularly in pregnant women. The prevalence of anemia is disproportionately high in the developing countries, due to poverty, inadequate diet, worm infestations, pregnancy/lactation and poor access to the health services. The world's adolescent population is facing a series of serious nutritional challenges which are not only affecting their growth and development but also their livelihood as adults. Yet, adolescents remain a largely neglected, difficult- to- measure and hard- to- reach population, in which the needs of adolescent girls in particular, are often ignored. Adolescent girls are at a high risk for anemia and malnutrition. Inadequate nutrition during adolescence can have serious consequences throughout the reproductive years of life and beyond. Very often, in India, girls get married and pregnant even before the growth period is over, thus doubling the risk for anemia. The nutritional anemia in adolescent girls attributes to the high maternal mortality rate, the high incidence of low birth weight babies, high perinatal mortality and the consequent high fertility rates. This phase of life is also important due to the ever-increasing evidence that the control of anemia in pregnant women can be more easily achieved if satisfactory iron statuses can be sure during adolescence. About 43% of the adolescent deaths are related to pregnancy. Pregnancy during adolescence deprives the girls from achieving their full growth according to their genetic potential.

Adolescence is a transitional age of physical and psychological human development generally between puberty and legal adulthood. Adolescence is a second phase of life. It is "coming of age" as children grow into adult physically, mentally and socially.
Young population ranges from 10-24 years of age which includes adolescents & youth both. Adolescence refers more broadly to the phase of human development encompassing the transition from childhood to adulthood. In terms of age, it is the period of life that is extended from10-19 years referred as adolescence; 15-24 years age termed as youth.

Objective

- To assess the nutritional status.

Material and methods

Scientific methodology is necessary for a successful study as it directly indicate words. The authenticity of the research and attempt has been made to provide the detail of techniques employed to attain this objective of a present investigation. Methodology includes techniques; devices and procedure applied for conducting the research, in this study, the respect concerning the research methodology have been categorized in the following.

Research Design

Simple random sampling was taken for sampling. Primary and secondary data would be collected. The method of primary data will be collected for the objectives of the main study on the "A study on Consequences and Prevalence of anemia among college going girls (18-22Years) of Sultanpur city" through interview schedule questionnaire.

Selection of area- The area of Sultanpur district was purposively selected because study has been easily accessible for the researcher for collection data.

Selections of Sample Size – Total 100 repondents were selected for the study purposively.

Methods of data co/llection

Survey method was adopted in order to collection of data from the selected respondent with the help of the developed questionnaire schedule. The schedule included aspect which led to the fulfilment of the objective of this study. The schedule included the following information-
1 - General information.
2 - Nutritional status through anthropometric measurement.
3 - Dietary information.

General information

The general information indicate these information such as –

Family - The family background means that is known how many members in the family which are male or female & which age group they belong.

Socio-economic status - The socio-economic status indicate that they are literate or illiterate and their source of income.

Anthropometry - Anthropometry is concerned with the measurement of various physical dimensions, some anthropometric measurement include height (mt) weight (kg) was recorded using the procedure prescribed by WHO (2004) and body mass index (BMI) calculated.

Height– Height of the subject was taken with the help of a measuring tape by sticking it on the wall.

Weight– The personal weighing machine of maximum capacity of 120 kg & and the minimum division of 0.5 kg was used to weigh all the subjects & the scale was set to zero.
BMI – BMI = Weight (kg)/Height (mt) 2

Analysis of data-The data was analyzed using talk mark method the finding have been presented in form of labels. Tabulation of data was made to compare each attribute. Each group in the table express in term of frequency & percentage. The selected samples were interviewed personally.

Statistical analysis

$$(\%) = \frac{N}{N} \times 100$$

(%) = Percentage
n = sum of the respondents
N= Total number of respondents

Result and discussion

The data collection of the different aspect per plan was tabulated and analyzed statistically. The result from the analysis are presented and discussed in the following sequence.

Table 1: Distribution of respondents on the basis of their Age group.

Age group	Frequency (N=100)	Percentage (%)
18 to 19	56	56%
20 to 22	44	44%
Total	100	100%

Above table shows that most of the respondents (56%) belong to age group of 18 to 19 years while (44%) of the respondents belong to the age group of 20 to 22 years.

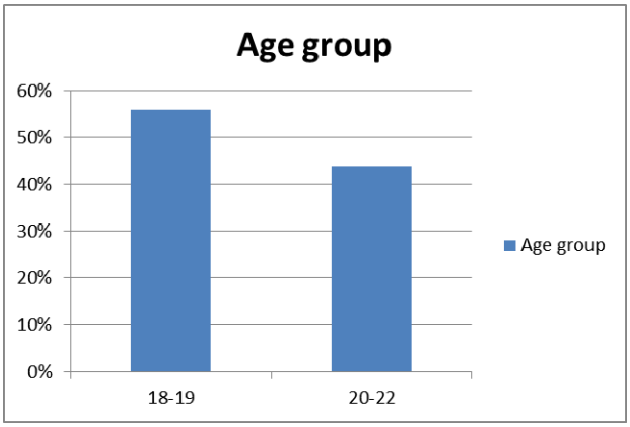

Fig 1: Distribution of respondents on the basis of their Age group.

Table 2: Distribution of respondents on the basis of their Family type.

Family type	Frequency (N=100)	Percentage (%)
Nuclear	43	43%
Joint	57	57%
Total	100	100%

Above table shows that 57% respondents were living in joint family while 43% of the respondents were living in nuclear family.

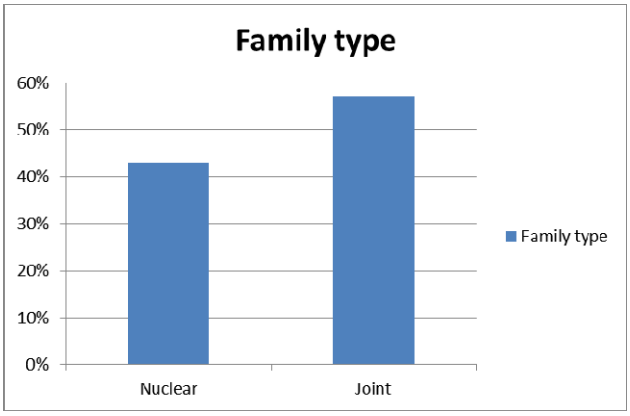

Fig 2: Distribution of respondents on the basis of their Family type.

Table 3: Distribution of respondents on the basis of their Family income.

Family income	Frequency (N=100)	Percentage (%)
Govt. Jobs	33	33%
Business	41	41%
Agriculture	13	13%
Others	13	13%
Total	100	100%

Above table shows that 33% of respondents were doing Govt. job while 41% of respondents were involve in business and 13% of respondents were engaged in agriculture and 13% of respondents were generating their income from other sources.

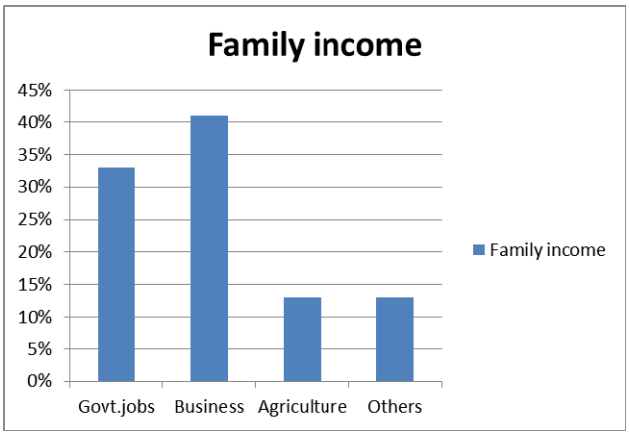

Fig 3: Distribution of respondents on the basis of their Family income.

Table 4: Distribution of respondents on the basis of their Tiredness or fatigue.

Tiredness or fatigue	Frequency (N=100)	Percentage (%)
Always	1	1%
Often	9	9%
Sometimes	13	13%
Never	77	77%
Total	100	100%

Above table shows that 1% of respondents were feeling tired or fatigued always while 9%of respondents were often feeling tired, 77% of respondents were not feeling tired ever while 13% of the respondents were feeling tired sometimes.

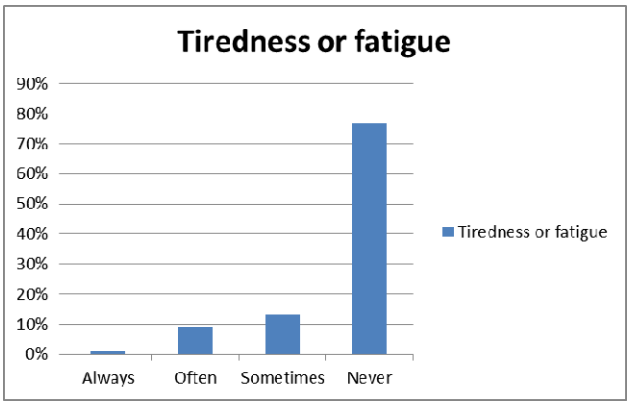

Fig 4: Distribution of respondents on the basis of their Tiredness or fatigue.

Table 5: Distribution of respondents on the basis of their Pale skin appearance.

Pale skin appearance	Frequency (N=100)	Percentage (%)
Yes	29	29%
No	71	71%
Total	100	100%

Above table shows that most of the respondents (71%) did not have pale skin appearance while 29% of the respondents were having pale skin appearance.

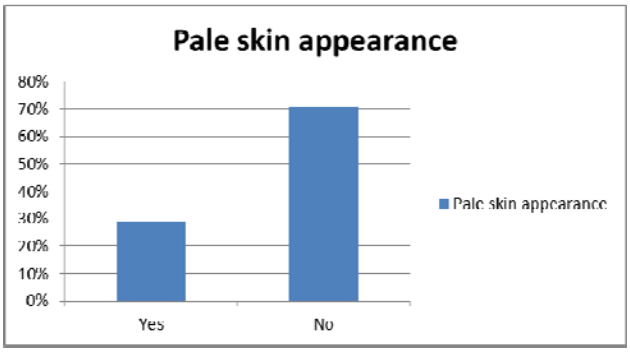

Fig 5: Distribution of respondents on the basis of their Pale skin appearance.

Table 6: Distribution of respondents on the basis of their Short of breath.

Short of breath	Frequency (N=100)	Percentage (%)
Always	2	2%
Often	10	10%
Sometimes	22	22%
Never	66	66%
Total	100	100%

Above table shows that having shortness of breath while 22% of respondents were sometimes feeling short of breath and most of the respondents (66%) were not having short of breath ever. Table shows that 2% 0f respondents were always feeling short of breathe, 10% of respondents were often.

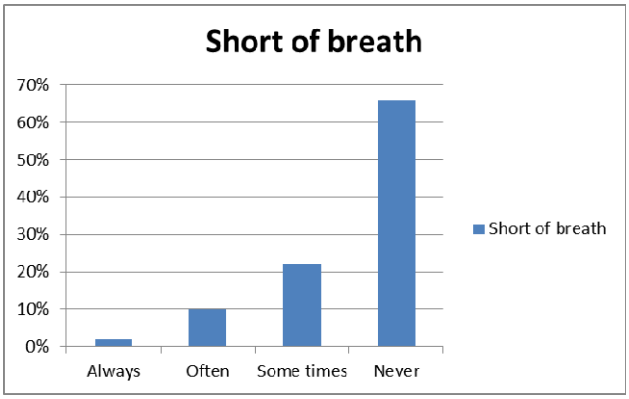

Fig 6: Distribution of respondents on the basis of their Short of breath.

Table 7: Distribution of respondents on the basis of their Feeling dizziness.

Feeling dizziness	Frequency (N=100)	Percentage (%)
Always	1	1%
Often	13	13%
Sometimes	30	30%
Never	56	56%
Total	100	100%

Above table shows that 13% of respondents were get dizzy often,30% girls were get dizzy sometimes,56% girls were get dizzy never.

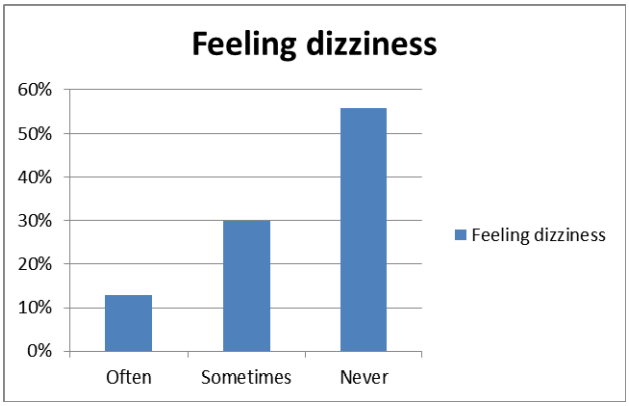

Fig 7: Distribution of respondents on the basis of their Feeling dizziness.

Table 8: Distribution of respondents on the basis of their Regular menstrual cycle.

Regular menstrual cycle	Frequency (N=100)	Percentage (%)
Yes	93	93%
No	7	7%
Total	100	100%

Above table shows that most of the respondents have regular menstrual cycle 93% while only 7% of the respondents have irregular menstrual cycle.

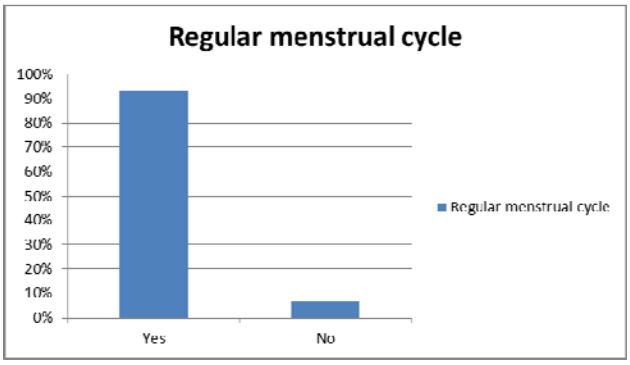

Fig 8: Distribution of respondents on the basis of their Regular menstrual cycle.

Table 9: Distribution of respondents on the basis of their Numbness or coldness.

Numbness or coldness	Frequency (N=100)	Percentage (%)
Yes	63	63%
No	37	37%
Total	100	100%

Above table shows that majority (63%) of the respondents were feeling numbness or coldness while 37% of respondents were not feeling so.

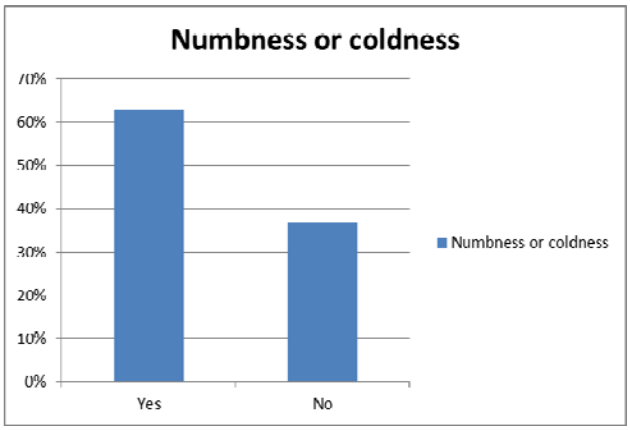

Fig 9: Distribution of respondents on the basis of their Numbness or coldness.

Table 10: Distribution of respondents on the basis of their Irritability

Irritability	Frequency (N=100)	Percentage (%)
Yes	78	78%
Always	0	0%
Sometimes	77	77%
Often	1	1%
Never	0	0%
No	7	7%
Total	100	100%

Above table shows that none of the respondents was getting irritated always, 77% of the respondents were irritated sometimes while only 1% of respondents got irritated often and 7% of respondents were not feeling irritation.

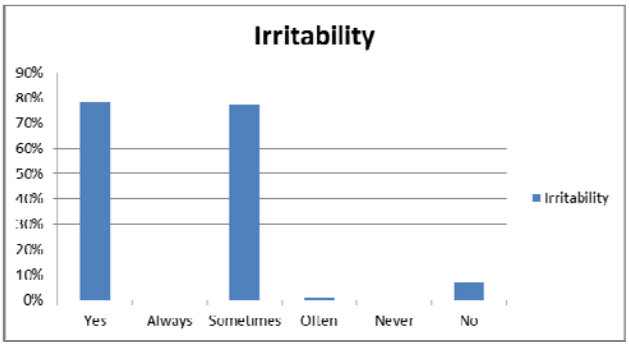

Fig 10: Distribution of respondents on the basis of their Irritability.

Table 11: Distribution of respondents on the basis of their Sad/depressed.

Sad/depressed	Frequency (N=100)	Percentage (%)
Yes	78	78%
Always	2	2%
Sometimes	67	67%
Often	9	9%
Never	0	0%
No	22	22%
Total	100	100%

Above table shows that the majority of respondents (78%) were feeling sad /depressed. Among them 2%respondents were always feeling sad/ depressed, 67% respondents were feeling sadness sometimes, &9% respondents were often feeling sadness /depressed. While 22% of the respondents were not feeling sadness /depressed.

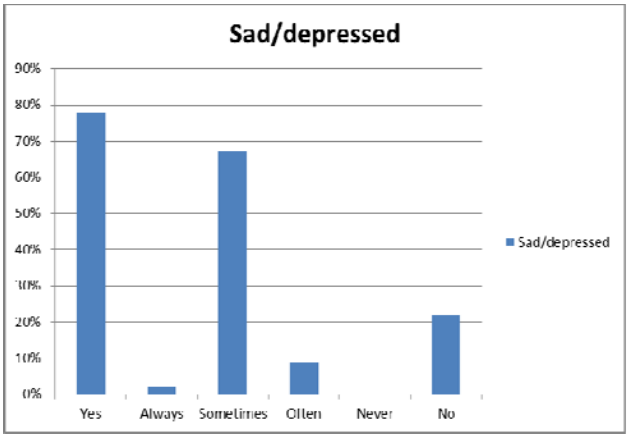

Fig 11: Distribution of respondents on the basis of their Sad/depressed.

Table 12: Distribution of respondents on the basis of their Anaemic.

Anaemic	Frequency (N=100)	Percentage (%)
Yes	18	18%
No	82	82%
Total	100	100%

Above table shows that 18% of the respondents lead low Hb level (Anaemia) while 82% of the respondents were not anaemic.

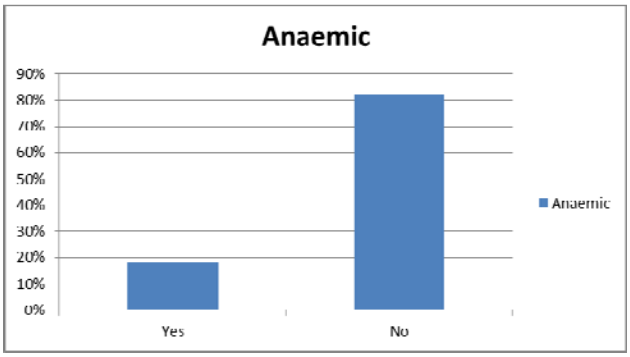

Fig 12: Distribution of respondents on the basis of their Anaemic.

Table 13: Distribution of respondents on the basis of their Hb level.

Hb level	Frequency (N=100)	Percentage (%)
Yes	40	40%
No	60	60%
Total	100	100%

Above table shows that only 40% of the respondents know their Hb level while majority of respondents (60%) did not know their Hb level.

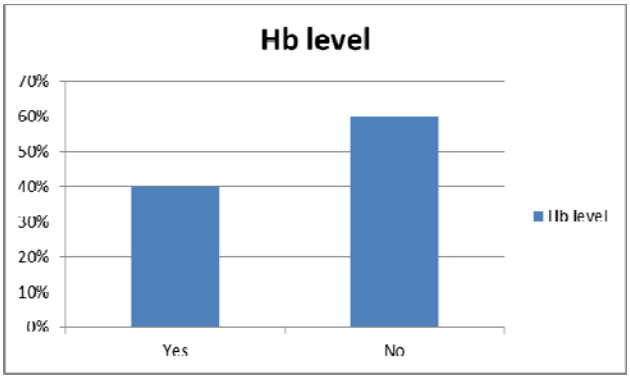

Fig 13: Distribution of respondents on the basis of their Hb level.

Table 14: Distribution of respondents on the basis of their Diet modification.

Diet modification	Frequency(N=100)	Percentage (%)
Yes	67	67%
No	33	33%
Total	100	100%

Above table shows that majority of respondents (67%) were aware about diet modification during iron deficiency and 33% of the respondents were not modified their diet.

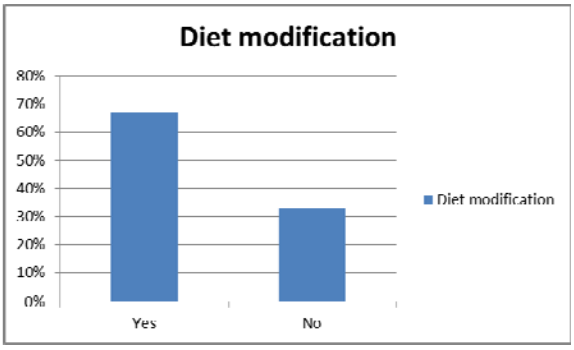

Fig 14: Distribution of respondents on the basis of their Diet modification.

Table 15: Distribution of respondents on the basis of their BMI.

BMI	Frequency (N=100)	Percentage (%)
Normal weight	51	51%
Under weight	48	48%
Over weight	1	1%
Total	100	30

Above table shows that most of the respondents 51% normal weight while 48% girls were respondents under weight and 1% girls were respondents over weight.

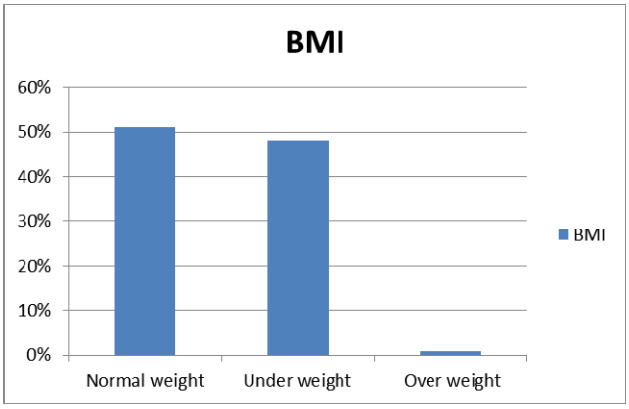

Fig 15: Distribution of respondents on the basis of their BMI.

Summary and conclusion

The present dissertation is the most common form of anemia throughout the world affecting mainly adolescent girls. Iron deficiency is the causes for 1/3 of patients suffering from anaemia. To present study entitled "A study impact on Consequences and pre-valences of anaemia among adolescent girls in Sultanpur city."

The survey study was carried out in the Kamla Nehru Institute of Physical And Social Sciences. The sample size was restricted to 100 and the study samples were selected randomly. The objective of this study is to assess the nutritional status. To study the dietary habits. The possible causes of anemia disease among the 18 percent. A questionnaire was developed to collect data from Sultanpur city collected data classified in table form and frequencies shows in percentage, result was presented in graph.

Result shows that majority of anemia diseases girls in the age group 18-22 years in Sultanpur city. Above table shows that most of the respondents (56%) belong to age group of 18 to 19 years while (44%) of the respondents belong to the age group of 20 to 22 years. Above table shows that 57% respondents were living in joint family while 43% of the respondents were living in nuclear family.

Above table shows that 33% of respondents were doing Govt. job while 41% of respondents were involve in business and 13% of respondents were engaged in agriculture and 13% of respondents were generating their income from other sources. Above table shows that 1% of respondents were feeling tired or fatigued always while 9%of respondents were often feeling tired, 77% of respondents were not feeling tired ever while 13% of the respondents were feeling tired sometimes. Above table shows that most of the respondents (71%) did not have pale skin appearance while 29% of the respondents were having pale skin appearance. Above table shows that having shortness of breath while 22% of respondents were sometimes feeling short of breath and most of the respondents (66%) were not having short of breath ever. Table shows that 2% 0f respondents were always feeling short of breathe, 10% of respondents were often. Above table shows that 13% of respondents were get dizzy often,30% girls were get dizzy sometimes,56% girls were get dizzy never. Big majority of the respondents 56% never. Above table shows that most of the respondents have regular menstrual cycle 93% while only 7% of the respondents have irregular menstrual cycle. Above table shows that majority (63%) of the respondents were feeling numbness or coldness while 37% of respondents were not feeling so. Above table shows that none of the respondents was getting irritated always, 77% of the respondents were irritated sometimes while only 1% of respondents got irritated often and 7% of respondents were not feeling irritation. Above table shows that the majority of respondents (78%) were feeling sad /depressed. Among them 2%respondents were always feeling sad/ depressed, 67% respondents were feeling sadness sometimes, &9% respondents were often feeling sadness /depressed. While 22% of the respondents were not feeling sadness /depressed. Above table shows that 18% of the respondents lead low Hb level (Anaemia) while 82% of the respondents were not anaemic. Above table shows that only 40% of the respondents know their Hb level while majority of respondents (60%) did not know their Hb level. Above table shows that majority of respondents (67%) were aware about diet modification during iron deficiency and 33% of the respondents were not modified their diet. Above table shows that most of the respondents 51% normal weight while 48% girls were respondents under weight and 1% girls were responds over weight.

Conclusion

Young girls face more problems than boys, largely due to socio-cultural factors. There are limited choices available for the futures & girls are caught in the cycle of early marriage, pregnancy & childbearing. Education regarding the nutrition & other health aspect during study period will help the young college girls for their future life. In spite of many efforts from different governmental& non-governmental agencies focusing on different health aspects, this young population, especially the girls, is deprived of the basic health care & awareness.

Limitations of study

- The study is carried out for short period, so that time and other resources are limited to an extent.
- It was questionnaire schedule method which has its own limitations of respondent dependent information without any alternative.

Acknowledgement

All glory to the almighty, whose blessing in the success behind this project praise pride and perfection belong to almighty. So first of all I would like to express my deepest sense of gratitude to the omniscient power of the universe, the almighty God.

This project would not have been possible without the support of many people. Word fails to express my sense of independence and profound gratitude toward my honorable Adviser Miss Archana Singh, and Co-adviser Dr. Mamta Jaiswal (H.O.D.) and Co-adviser Miss Kiran Agrahri and Faculty of Home Science, Kamla Nehru Institute of Physical and Social Sciences, Sultanpur (U.P.), for her noble advise constructive criticism and valuable suggestion. Many thanks to my honourable adviser for her innovative ideas, valuable suggestion unending inspirations enduring fortified during my study. Her continued encouragement positive attitude towards my ability made the achievements of this goal easy to tackle

complete my work in time. Idem it is rare opportunity and the proud privilege of my life to express my best regard sense of homage and gratitude to my reverent parents Mr. Rajendra Prasad Pandey and my mother Pushpa Pandey and my beloved brothers Ankit Pandey and Vasu Pandey and my affectionate sister sister Anchal Pandey and my family's constant inspiration, everlasting affection, their blessing sacrifices emotion, financial and moral support are the prime fact which made me capable of doing this all. From the very special corner of my heart I wish to record my indebtedness to my friends for their kind help and express my manifold thanks to Nida Fatma. I am also thankful to all respondents for giving me proper cooperation during the data collection.

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