A Study to Assess the Prevalence and Risk Factors which Contribute to Anemia Among Adolescent Girls in Selected Schools of Basti

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ABSTRACT

A study to assess the Prevalence and Risk factors which contribute to Anemia among Adolescent girls in selected Schools of Basti. The aim of the study is to assess the Prevalence and Risk factors which contribute to Anemia among Adolescent girls in selected Schools. The objective of the study is to estimate the prevalence of anemia among adolescent girls in selected schools of Basti. To find out the association between the prevalence of anemia among adults and girls with socio demographic menstrual factors, dietary factors. The Hypothesis.H0- There will be no statical significance of prevalence of anemia with socio demographic measures, dietary factors H1-There will be a statical significance of prevalence of anemia with socio demographic menstrual factor dietary factors. The limitation of the study is limited to only adolescent girls who are available in selected schools. The study is limited to adolescent girls who are between 10 to 15 years.

The exclusion criteria are adolescent girls who are already taking treatment of anemia and adolescent girls who are having blood related disorders.

The setting of the study is selected Schools of Basti. The setting is appropriate to conduct the study because advocate number of adults and girls from age 10 to 15 yrs were available who could be taken for the study.

The target population of this study was adolescent girls aged 10 to 15 years. Sample size is 150 Adolescent girls. In this study, sampling technique was nonprobability convenience technique. In this study dependent Variable is hemoglobin level of adolescent girl and independent variables are prevalence and risk factors of anemia. In the study, tools used are structured questionnaire and Hb's estimation procedure. This research shows the significant association between the prevalence of anemia and type of family and duration of blood flow, other than this, no significant association between other demographic variables and risk factors of anemia with prevalence of anemia.

Keyword: Anemia, Health, Hemoglobin, Hb's estimation

INTRODUCTION

Anemia is a condition in which you lack enough healthy red blood cells to carry adequate oxygen to your body's tissues. Having anemia, also referred to as low hemoglobin, can make you feel tired and weak. There are many forms of anemia, each with its own cause". Anemia, the word anemia, derives from a Greek word that means 'no blood.' The term chlorosis a Greek term meaning brown, first described the signs of anemia. Anemia is not disorder, it is a condition that results from red blood cells, below normal levels of hemoglobin. Earlier references of anemia can be dated back to 1684 when a study on blood composition was conducted by Robert Boyle.

In India reported by to National Health and Family Survey (NHFS-3), in adolescent girls aged between 15 and 19 years the prevalence of anemia is 55.8%, including 39.1% with mild anemia, 14.9% with moderate anemia and 1.7% with severe anemia. 45.3% of women aged 15-49 years in India are anemic, according to NHFS. The incidence rate of anemia in India embryonic and non- embryonic mother age between 15 to 49 years is 50.3% and 53.1%. Similarly, the incidence rate of anemia in women aged 15-49 years in Maharashtra is 56.2%.

"Hemoglobin (Hb) rate in women below 12.0 g / dl and in men below 13.0 g / dl are known as WHO anemia".[7] Anemia classified by erythrocyte size are anemia of microcytic: Microcytic anemia is called where erythrocyte is lower than normal. Anemia and thalassemia are the major causes of this type. (inherited hemoglobin disorders) due to iron deficiency (low iron level), Normocytic anemia: Where erythrocyte volumes are regular (but below in number), it is considered normal anemia, i.e. chronic disease accompanying anemia or kidney disease related anemia, Macrocytic anemia: It is called macrocytic anemia If there are more Erythrocyte than normal. Pernicious anemia are more common causes of this type and anemia associated with alcohol. **Symptoms of Anemia:** Fatigue, reduced strength, fatigue, breathing difficulty, headache, palpitations (sensation of heart racing or tachycardia), and looks pale**.**

Anemia related symptoms in severe condition: Pain in the chest, angina, or heart attack, tiredness, fainting or passing away, and fast heart rate. Some of the signs that a person can experience anemia may include: Change in stool color, like black and tarry stools (sticky and bad smelling), dark or clearly bloody stools if anemia is caused by gastrointestinal bleeding, tachycardia, hypotension, quick breathing, pale or hypo pyrexia, yellow skin called jaundice if anemia is caused by red blood cell breakdown, heart murmur and splenomegaly with some causes of anemia.

Medical treatment of anemia: Mild anemia and is known to be associated with below normal level of iron, which may result in iron supplements. When anemia is associated with a sudden loss of blood from an injury or excessive bleeding during an ulcer in the stomach, it may be necessary to reduce the physical sign and restore the blood loss by hospitalizing and transfusing erythrocyte. Additional bleeding control measures can happen simultaneously to avoid further blood loss. In other less important cases, transfusion of blood may also be needed. For example, the counselor can expect a person taking chemotherapy for cancer to have chemotherapy-related bone marrow issues. The physician may therefore check blood counts regularly, and if the rates are too low, physicians may prescribe a transfusion of erythrocytes to help with anemia symptoms.

NEED OF THE STUDY

Anemia affects one third of the world's population, mainly iron deficiency anemia. India continues to be one of the most prevalent countries. The NFHS-3 shows that anemia prevalence is 70-80% in childhood,

70% in pregnancy, and 24% in adult men. In India prevalence of anemia is high due to poor dietary intake, low iron availability, severe menstrual blood loss, Chronic loss of blood due to infestation of the hook worms and malaria. Although anemia has documented side effects on individuals physical and cognitive efficiency, the true toll of anemia with iron deficiency is due to the Negative maternal and child health effects. Poor nutritional health and anemia have long-term effects during pregnancy.

During adolescent period adolescent girls facing problem of anemia and not taking care and treatment, afterword complication occurs like Depression, heart disease like arrhythmias, heart murmur, cardiomegaly or even cardiac heart failure, increased risk of infection, delays in engine or cognitive development in children, Complications of pregnancy, like preterm delivery or giving birth to a LBW baby,

STATEMENT OF THE PROBLEM
A study to assess the Prevalence and Risk factors which contribute to Anemia among Adolescent girls in selected Schools of Basti.

AIM
To assess the Prevalence and Risk factors which contribute to Anemia among Adolescent girls in selected Schools.

OBJECTIVES OF THE STUDY
1. To estimate prevalence of anaemia among adolescent girls in selected schools.
2. To find out the association between the prevalence of anaemia among adolescent girls with socio-demographic, menstrual factors, dietary factors.

HYPOTHESIS
H0. There will be no statistical significant of prevalence of anemia with socio-demographic, menstrual factors, dietary factors.
H1. There will be statistical significant of prevalence of anemia with socio-demographic, menstrual factors, dietary factors.

METHODOLOGY-
Research approach – The investigator has adopted quantitative research approach.
Research design- The investigator has adopted cross-sectional survey design.
Setting up the study- This research was performed in selected schools of Basti.
Sample and sample size – In this study, the study the sample was a dose and girl from age 10 to 15 years of selected school.
Sampling technique- In this study, sampling technique was nonprobability convenience.

CRITERIA FOR SAMPLE SELECTION
Inclusion criteria
1. Adolescence girls who are willing to participate in the study.
2. Adolescence girls who are in the age between 10-15 years.
3. Adolescence girls who are available at the time of study

Exclusion criteria

1. Adolescence girls who are already taking treatment of anaemia.
2. Adolescence girls who are having blood related disorder.

ORGANIZATION OF FINDINGS

The findings are examined and interpreted in the following section:

Section A: Distribution of adolescent girls with regards to demographic variables.

Section B: Distribution of adolescent girls regarding prevalence of anemia.

Section C: Distribution of adolescent girls with regards to menstrual factors, dietary factors.

Section D: Association of prevalence of anemia with socio-demographic, menstrual factors and dietary factors.

SECTION A

Section A dealt with the percentage wise distribution of adolescent girls by demographic variable. Convenient samples consist of a total of 150 subjects which was selected from school were the data designed from the study population the data was collected to define various characteristics such as age, education, types of family, monthly income and type of diet.

Table 1: Percentage wise distribution of adolescent girls according to their demographic characteristics. n=150

Demographic Variables	Frequency	Percentage
Age in years		
10-11 years	55	36.7
12-13 years	46	30.7
14-15 years	49	32.7
Girls Education		
Primary	11	7.3
Middle School	118	78.7
Secondary	21	14.0
Mother's Education		
Illiterate	17	11.3
Primary	89	59.3
SSC	37	24.7
HSC	7	4.7
Undergraduate	0	0

Type of family		
Nuclear	104	69.3
Joint	29	19.3
Extended	17	11.3
Monthly family income		
Graduate	0	0

Rs. 9000-10000	89	59.3
Rs. 10001-11000	15	10.0
Rs 11001-12000	24	16.0
Rs 12001 and above	22	14.7
Type of diet		
Vegetarian	82	54.7
Non-Vegetarian	68	45.3

Table 1 shows that frequency and percentage wise distribution of adolescent girls was according to the age of adolescent girls, girl's education, mother's education, type of family, monthly family income and type of diet respectively.

The majority of 55(36.7%) of adolescent girls were 10-11 years of age group, 46(30.70%) of adolescent girls were 12-13 years of age group, and 49(32.70%) were 14-15 years of age group.

Only 11(7.30%) of the adolescent girls were educated up to primary standard, Majority of adolescent girls 118(78.70%) were educated up to middle school and 21(14%) adolescent girls were educated up to secondary standard.

Only 17(11.30%) of the mothers of adolescent girls were illiterate, 89(59.30%) of them were educated up to primary standard, 37(24.70%) of them were educated up to SSC, 7(4.70%) of them were educated up to HSC standard and no one were educated upto undergraduate and graduate.

104(60.30%) of the adolescent girls were residing in nuclear families, 29(19.30%) in joint and only 17(11.30%) of them were residing in extended families.

89(59.30%) of the adolescent girls had monthly family income of Rs.9001-10000, 15(10%) of them had between Rs.10001-11000, 24(16%) had between Rs.11001- 12000 and 22(14.70%) of them had income more than Rs.12000

Majority of the adolescent girls 82(54.70%) were consuming vegetarian diet and 68(45.30%) of them were consuming non-vegetarian diet.

SECTION B
ASSESSMENT OF PREVALENCE OF ANEMIA AMONG ADOLESCENT GIRLS IN SELECTED SCHOOL

**Table 2: Assessment of prevalence of anaemia**

n=150

Score Range	Prevalence of anemia	
	Frequency	Percentage
Normal Hb level	35	23.33
Mild anemia	53	35.33
Moderate anemia	59	39.33
Severe anemia	3	2
Total	150	100

Table no. 2 above shows the frequency and percentage of wise distribution of adolescent girls based on prevalence of anemia. Anemia levels were observed in 4 categories, normal levels of Hb%, mild anemia, moderate anemia, and severe anemia.

Out of 150 adolescent girls, were found 35(23.33%) of the adolescent girls had normal Hb level,

53(35.33%) had mild anemia, majority of the adolescent girls59(39.33%) had moderate anemia and only 3(2%) adolescent girls were severely anemia.

Graph 19: Assessment of prevalence of anemia
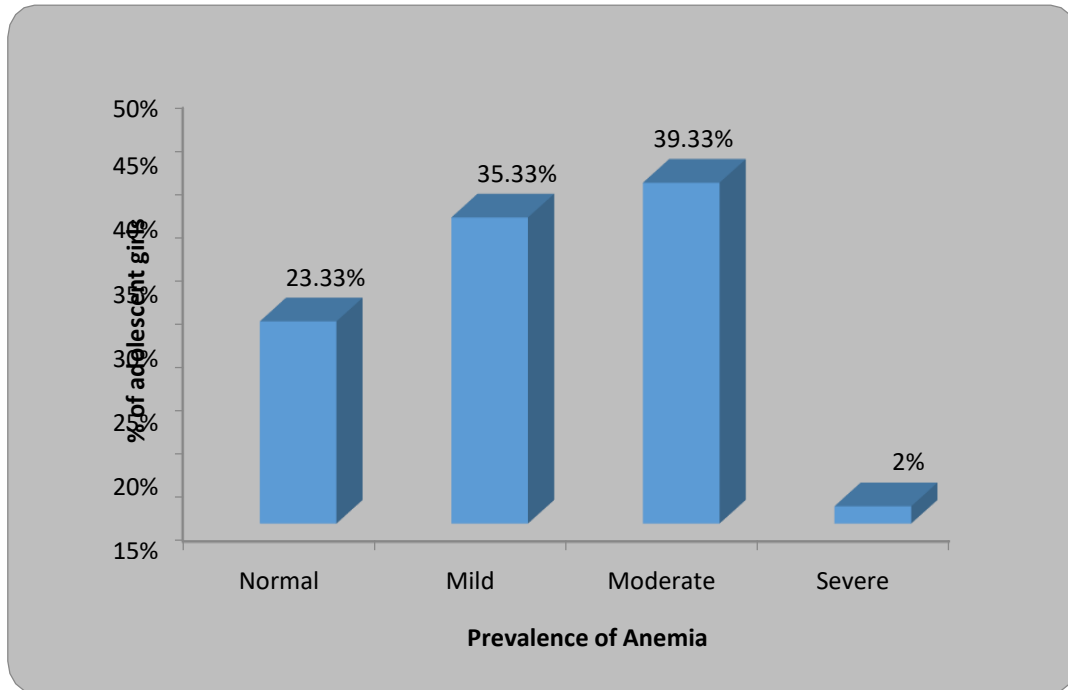

SECTION C

This section addresses the percentage of wise distribution of adolescent girls by their menstrual factors. A convenient sample was taken from the study population of 150 subjects, who were from selected school. The data was collected to define the sample's characteristics including age at menarche, duration of blood flow, number of sanitary pads used per day, dysmenorrhea and pattern of menstrual cycle respectively.

Table 3: Percentage wise distribution of adolescent girls according to theirmenstrual factors n=150

Menstrual Factors	Frequency	Percentage
Age of menarche		
Not Attended	85	56.67
10-12 years	49	32.67
13-15 years	16	10.67
Duration of blood flow		
1-3 days	29	44.62
4-6 days	33	50.77
≥7 days	3	4.62

Number of sanitary pad used per day		
One	3	4.62
Two	18	27.69
Three or more	44	67.69
Dysmenorrhea		
Yes	34	52.31
No	31	47.69
Pattern of menstrual cycle		
Regular	64	98.46
Irregular	1	1.54
If, Irregular duration		
2 months	1	1.54

Graph 7: Percentage wise distribution of adolescent girls according to their ageat menarche
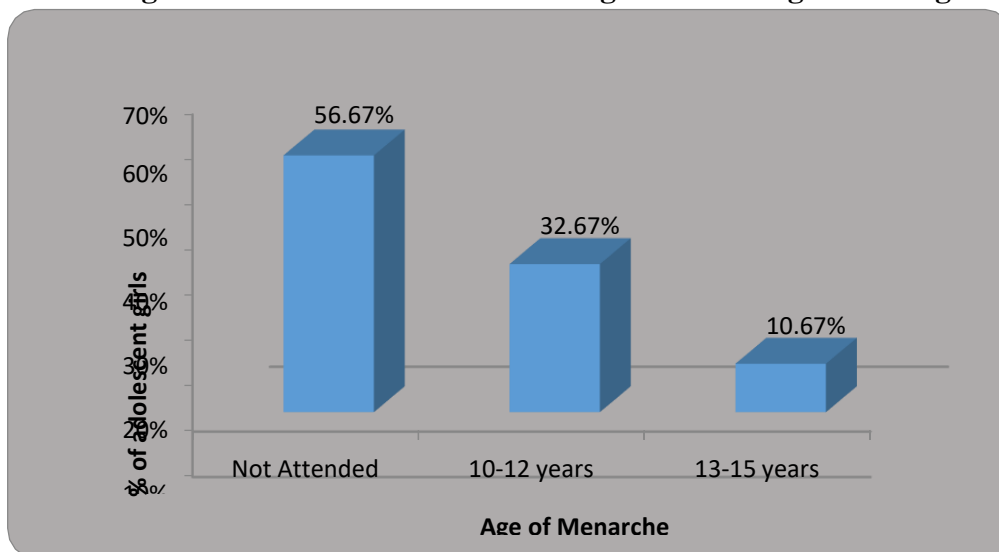

Out of the 150 adolescent girls, 85(56.67%) of the adolescent girls not attended menarche, 32.67(75.38%) of the adolescent girls had 10-12 years as a age at menarche and only 16(24.62%) of them had 13-15 years.

Graph 8: Percentage wise distribution of adolescent girls according to durationof blood flow
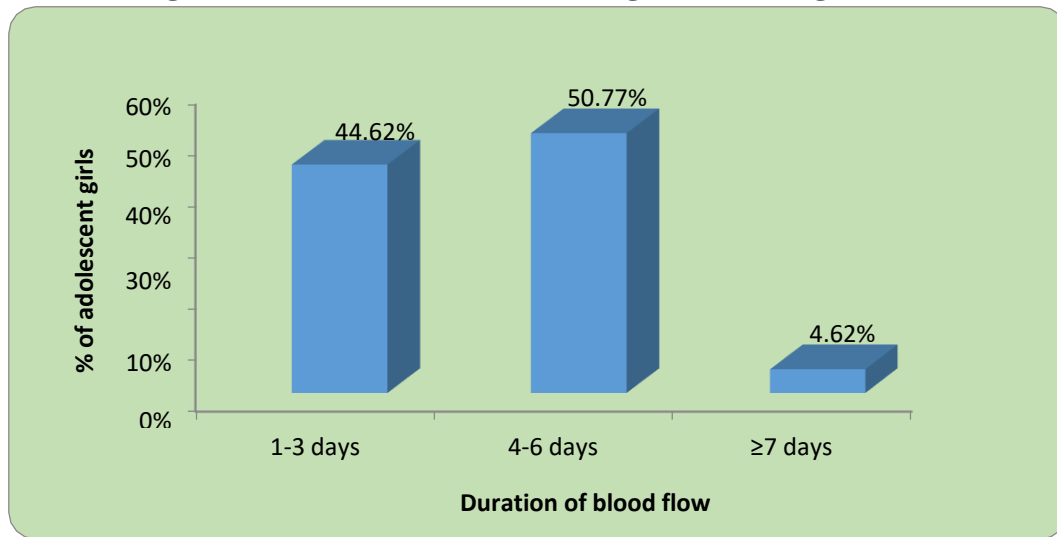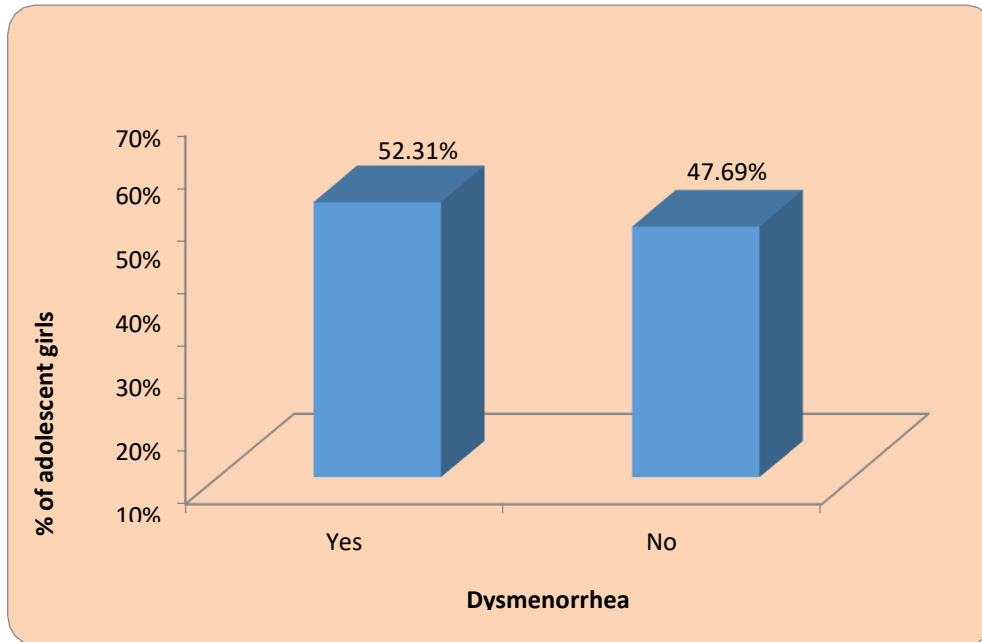

Majority 29(44.62%) of the adolescent girls had duration of blood flow 1-3 days, 33(50.77%) had 4-6 days and only 3(4.62%) adolescent girls had duration of blood flow more than 6 days.

**Graph 9: Percentage wise distribution of adolescent girls according to number ofsanitary pads used**
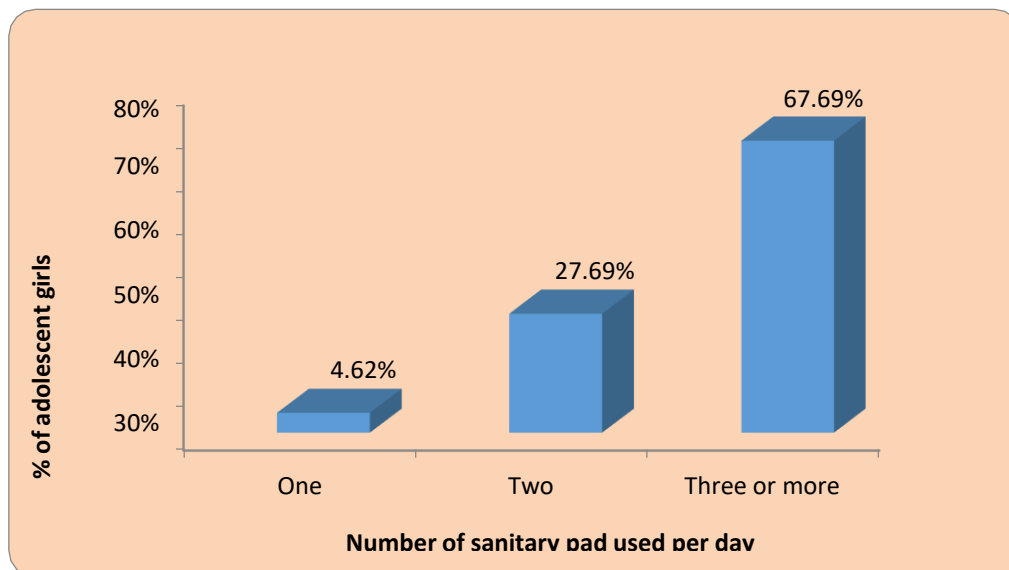
Only 3(4.62%) of the adolescent girls use one pad per day, 18(27.69%) uses two padper day and most of 44(67.69%) adolescent girls uses three sanitary pads per day.

Graph 10: Percentage wise distribution of adolescent girls according to historyof dysmenorrhea

34(52.31%) of the adolescent girls had dysmenorrhea and 31(47.69%) of them did not have dysmenorrhea.

Graph 11: Percentage wise distribution of adolescent girls according to pattern ofmenstrual cycle
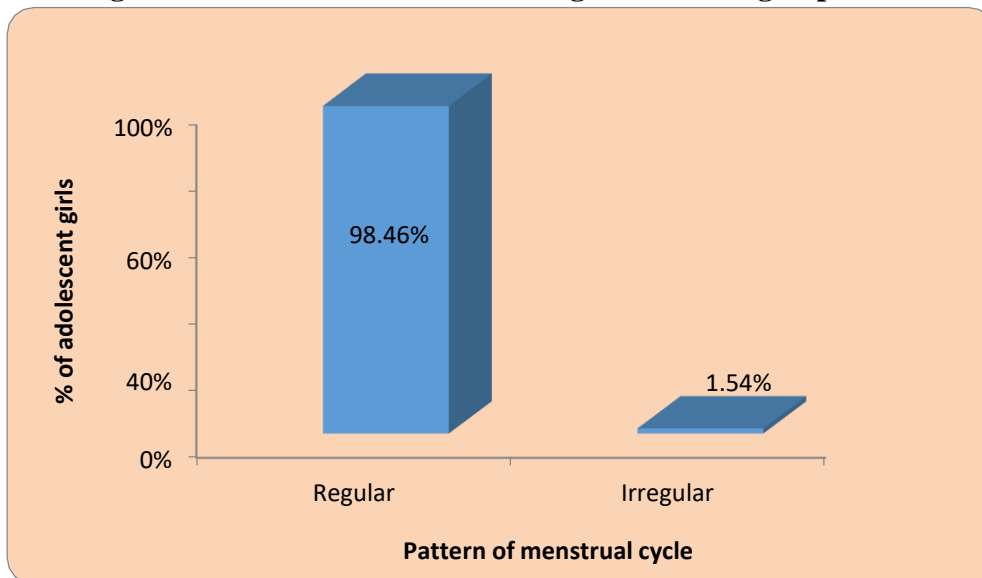
Majority of adolescent girls 64(98.46%) had regular pattern of menstrual cycle, andOnly 1(1.54%) of them irregular of menstrual cycle.

Only 1(1.54%) of adolescent girls had regular menstrual cycle and duration of menses is 2-month interval.

SECTION D

This section describes that there is a percentage wise distribution of adolescent girls which was based on their dietary factors. A convenient sample of 150 subjects was designed by the study population, whoever selected from schools. The data was collected to explain the sample's characteristics including

frequency of taking junk food, frequency of taking milk, frequency of taking meals, daily breakfast, daily fruits,fasting and frequency of tea/coffee respectively.

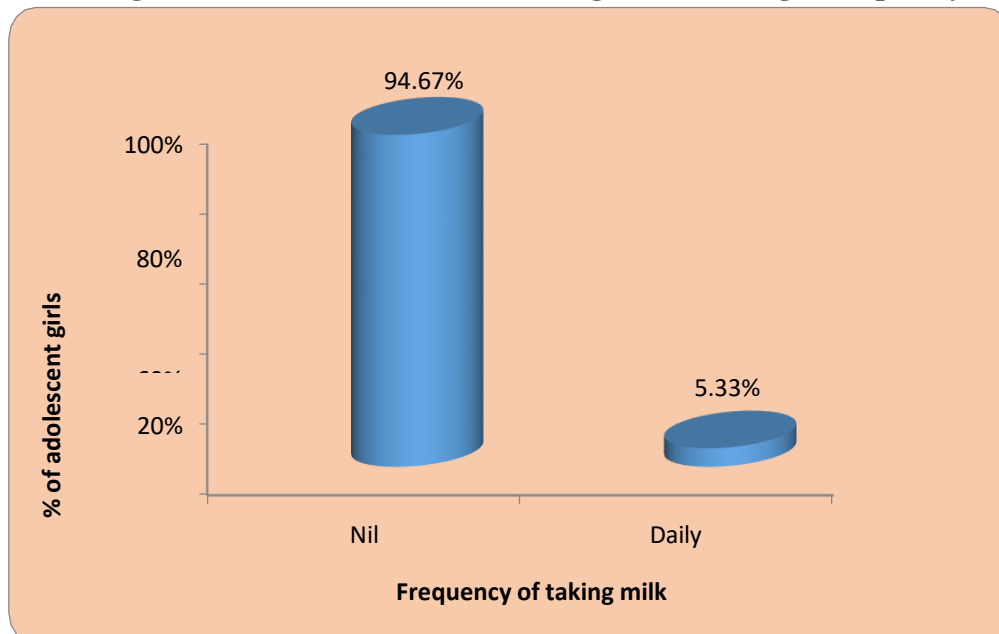**Table 4: Percentage wise distribution of adolescent girls according to their dietary factors**
n=150

Dietary Factors	Frequency	Percentage
Frequency of taking junk food		
Nil	145	96.67
Daily	5	3.33
Frequency of taking milk		
Nil	142	94.67
Daily	8	5.33
Frequency of taking meal		
One Time	3	2
Two Time	87	58
Three Time	60	40
More than three times	0	0
Daily Breakfast		
Yes	112	74.7
No	38	25.3
Daily Fruits		
Yes	10	6.7
No	140	93.3

Fasting		
Never	141	94
2 days in a week	9	6
4 days in a week	0	0
More than 4 days	0	0
Do you take fast food in between		
Yes	9	6
No	141	94
Frequency of tea/coffee		
Nil	47	31.33
Daily	103	68.67

Graph 12: Percentage wise distribution of adolescent girls according tofrequency of taking junk food
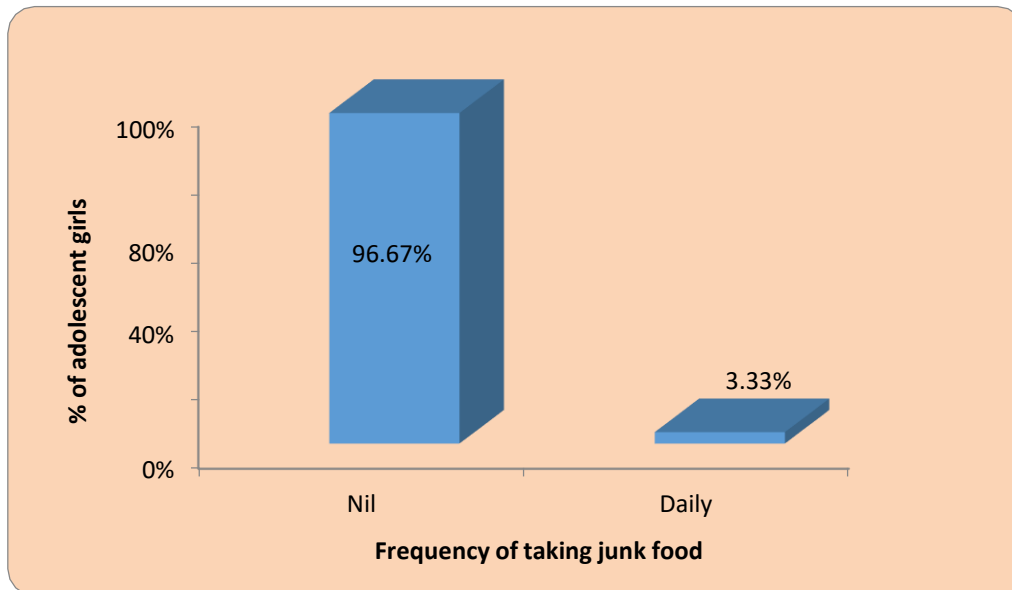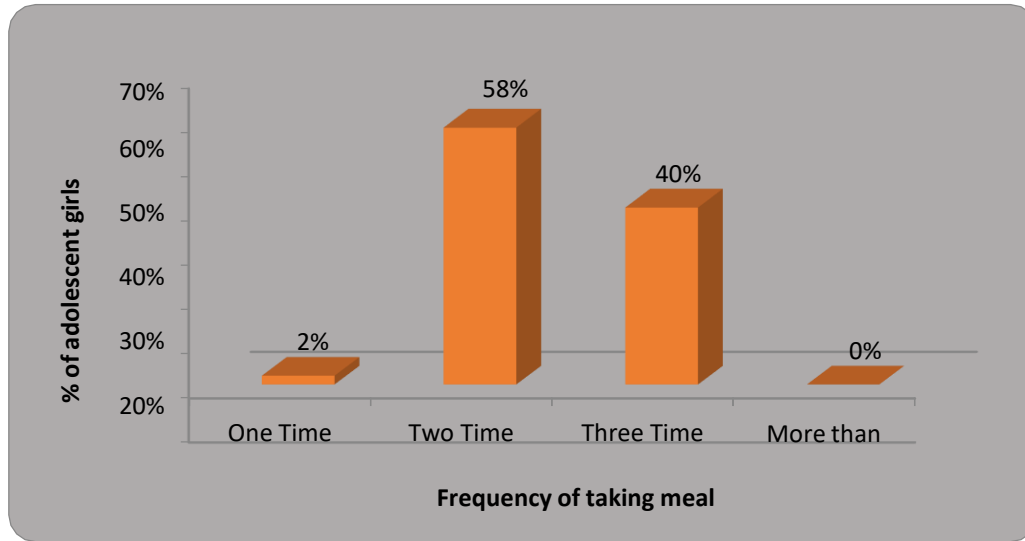

High majority 145(96.67%) of the adolescent girls were not taking junk foods and only 5(3.33%) were taking daily junk food.

Graph 14: Percentage wise distribution of adolescent girls according tofrequency of taking milk

High majority 142(94.67%) of the adolescent girls were not taking milk and only 8(5.33%) of them were taking milk daily.

Graph 15: Percentage wise distribution of adolescent girls according tofrequency of taking meal

Only 3(2%) of the adolescent girls were taking meal one time in a day, majority 87(58%) of them were taking two times meal, 60(40%) of them were taking three times meal and no one taking meal in more than three time.

Graph 16: Percentage wise distribution of adolescent girls according to dailybreakfast
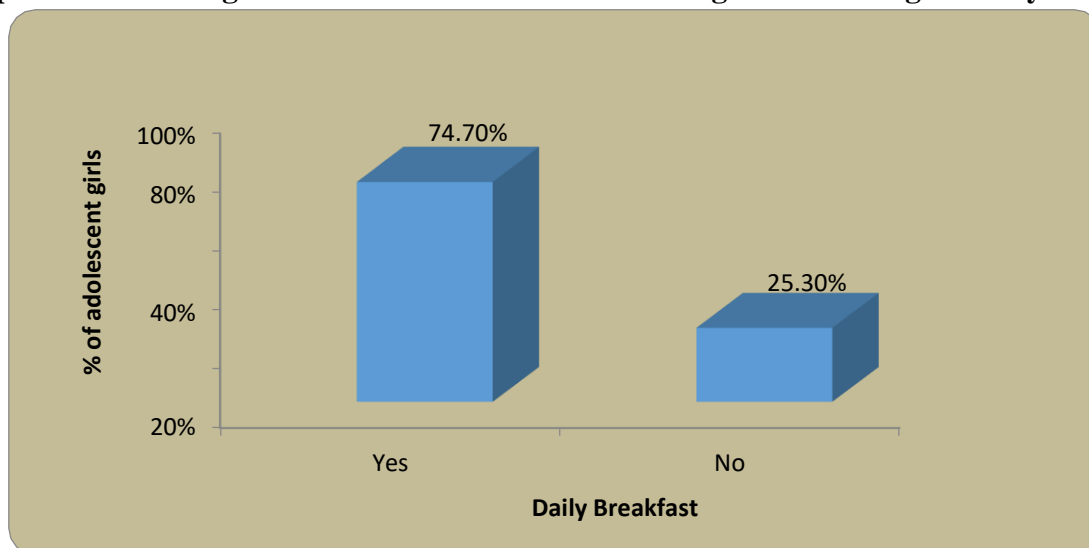
High majority 112(74.70%) of the adolescent girls were taking breakfast daily and 38(25.30%) of them were not taking daily breakfast.

Graph 17: Percentage wise distribution of adolescent girls according to dailyfruits
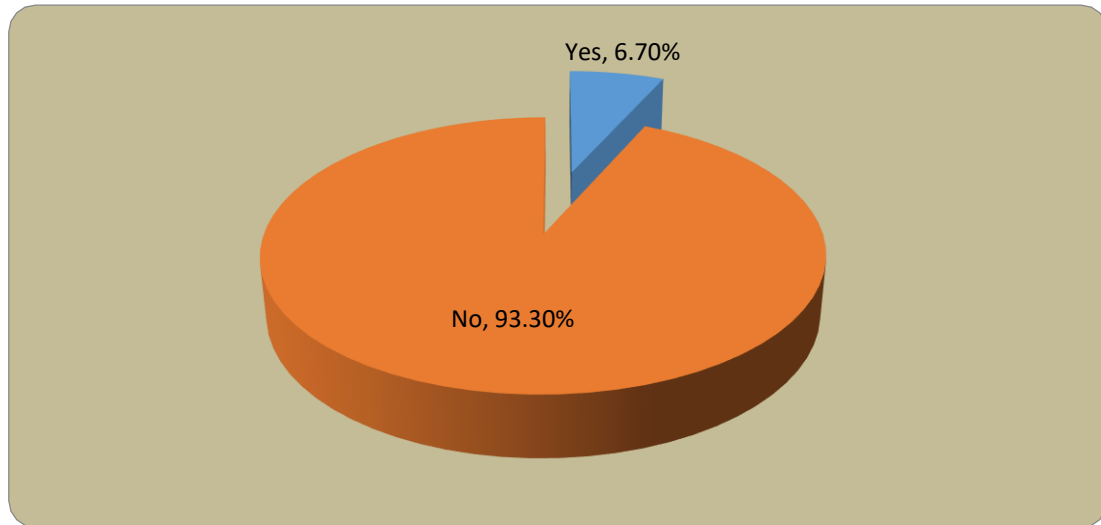
Only 10(6.70%) of the adolescent girls were daily consuming fruits and 140(93.30%) of them were not consuming fruits daily.

Graph 18: Percentage wise distribution of adolescent girls according to fasting
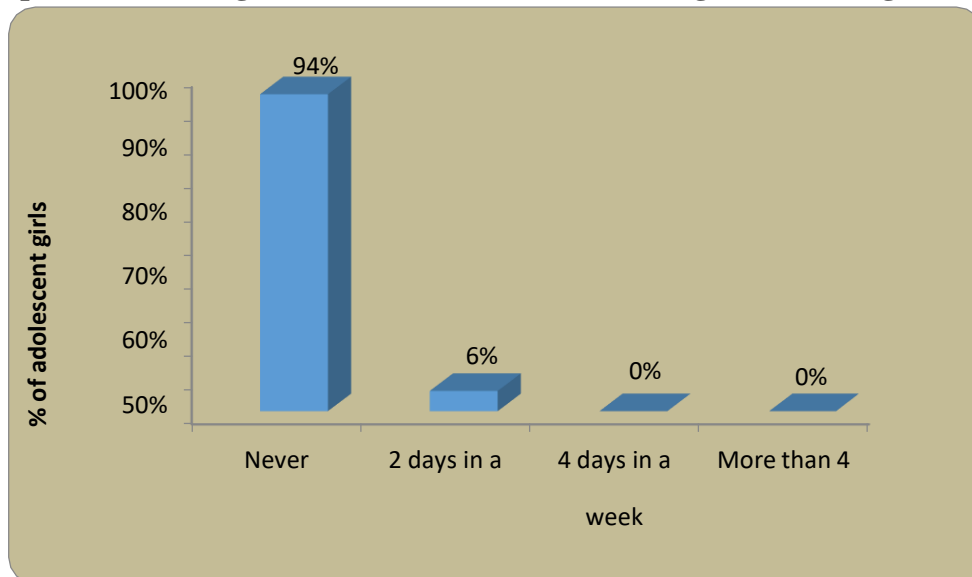
Higher majority 141(94%) of the adolescent girls not doing fasting, only 9(6%) of them were doing fasting of 2 days in a weeks and no one of them not doing fasting of 4 days in a weeks and no one of them not doing fasting more than 4 days in a weeks.

Graph 19: Percentage wise distribution of adolescent girls according to takingfast food in between
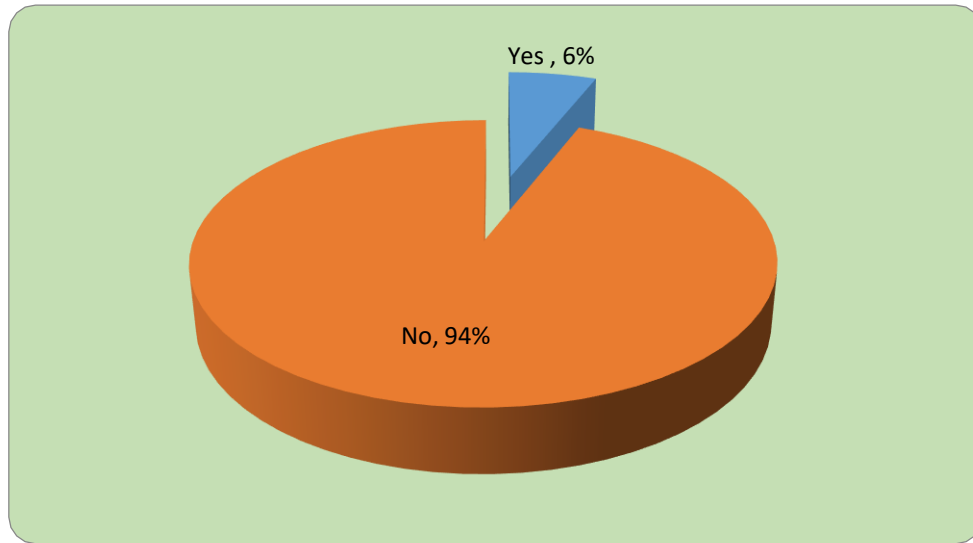
141(94%) of the adolescent girls were not doing fast, only 9(6%) of the adolescent girls were taking fast food in between fast.

Graph 20: Percentage wise distribution of adolescent girls according tofrequency of tea/coffee
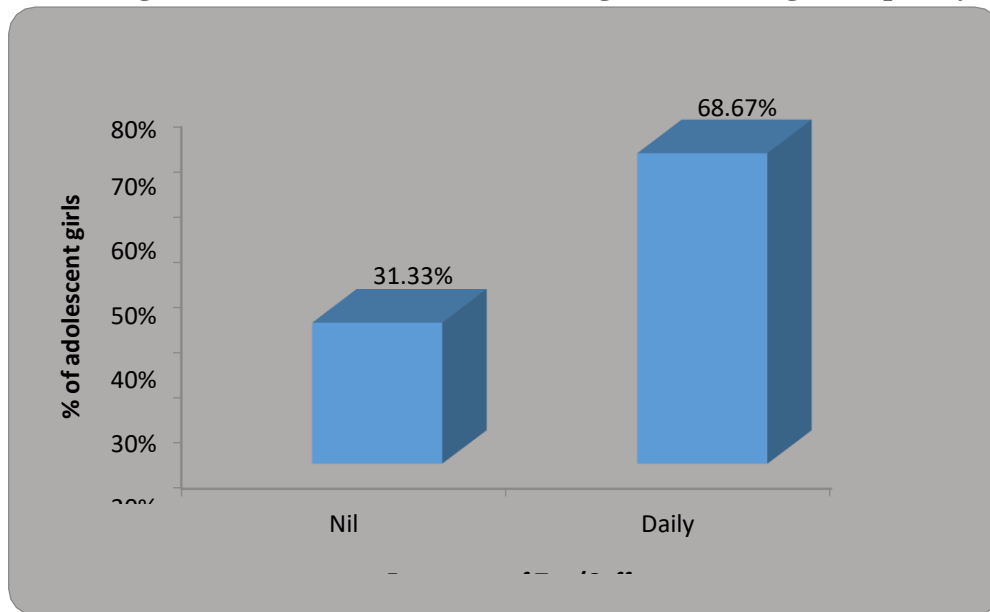
Most adolescent girls i.e. 103(68.67%) were taking tea/coffee daily, where as only 47(31.33%) of the adolescent girls were not taking tea/coffee.

SECTION E

ASSOCIATION OF SOCIO-DEMOGRAPHIC, MENSTRUAL AND DIETARY FACTORS WITH SELECTED PREVALENCE OF ANEMIA OF ADOLESCENT GIRLS IN SELECTED SCHOOLS

Table 5: Association of socio-demographic factors with prevalence of anaemia ofadolescent girls n=150

Demographic Variables	Frequency	Normal Anemia	Mild Anemia	Moderate Anemia	Severe Anemia	x^2-value	Df	x^2-tab val	p-value
Age in years									
10-11 years	55	10	19	25	1				
12-13 years	46	13	18	15	0				
14-15 years	49	12	16	19	2	4.47	6	12.59	0.61,NS
Girls Education									
Primary	11	4	4	3	0				
Middle School	118	26	42	48	2				
Secondary	21	5	7	8	1	2.46	6	12.59	0.87,NS
Mother's Education									
Illiterate	17	3	6	8	0				
Primary	89	23	29	35	2				
SSC	37	9	14	13	1				
HSC	7	0	4	3	0				
Undergraduate	0	0	0	0	0				
Graduate	0	0	0	0	0	4.36	9	16.91	0.88,NS
Type of family									
Nuclear	104	30	36	36	2				
Joint	29	5	12	11	1				
Extended	17	0	5	12	0	12.73	6	12.59	0.04,S

Monthly family income									
Rs. 9000-10000		89	23	33	32	1			
Rs. 10001-11000		15	5	4	5	1			
Rs 11001-12000		24	3	10	10	1			
Rs 12001 andabove		22	4	6	12	0	8.11	9	16.91	0.52,NS
Type of diet									
Vegetarian		82	19	32	28	3			
Non Vegetarian		68	16	21	31	0	4.42	3	9.83	0.21,NS

This table shows the association of prevalence of anemia with demographic characteristics of adolescent girls. The tabulated 'x^2' values were much higher than the calculated 'x^2' values at 5% level of significance for all demographic characteristics. And also there is calculated 'p-value which were much higher than the acceptable level of significance i.e. 'p'=0.05. The type of family of adolescent girls (p=0.04) is statistically associated with prevalence of anemia. Hence it is interpreted as a socio-

demographic variable of adolescent girls is statistically not associated with their prevalence of anemia, except the type of family.

The association between the prevalence of anemia of adolescent girls with age of adolescent girls were not significant i.e. p =0.61. Hence it was found that there wasno significant association between these variables. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with girl's education was not significant i.e. p =0.87. Hence the findings show there was no significant association between these variables. The null hypothesis was accepted for these variables.

The association between the prevalence of anemia of adolescent girls with mother's education was non significance i.e. p =0.88. Hence the findings showed no significant association between these variables. The null hypothesis was accepted for these variables.

The association between the prevalence of anemia of adolescent girls with a type of family were significant i.e. p =0.04. Therefore, it is shows the significant association between these variable. In these the alternative hypothesis was accepted, and the null hypothesis was rejected.

The association between the prevalence of anemia of adolescent girls with monthly family income was not significant i.e. p =0.52. Hence it is found that there was no significant association between these variables. The null hypothesis was accepted for these variables.

The association between the prevalence of anemia of adolescent girls with type of diet was not significant i.e. p =0.21. Therefore, it is found that there was no significant association between these variables. The null hypothesis was accepted for this variable.

Table 6: Association of menstrual factors with prevalence of anaemia of adolescent girls
n= 65

Menstrual Factors	Frequency	Normal Anemia	Mild Anemia	Moderate Anemia	Severe Anemia	χ^2-value	df	χ^2-tabval	p-value
Age at menarche									
10-12 years	49	12	18	17	2	3.26	3	7.81	0.25,NS
13-15 years	16	4	3	9	0				
Duration of blood flow									
1-3 days	29	4	12	13	0				
4-6 days	33	12	9	11	1	19.82	6	12.59	0.0001,S
≥7 days	3	0	0	2	1				
Number of sanitary pad used per day									
One	3	1	0	2	0				
Two	18	1	5	12	0	11.45	6	12.59	0.07,NS
Three or more	44	14	16	12	2				
Dysmenorrhea									
Yes	34	9	12	12	1	0.69	3	7.81	0.87,NS
No	31	7	9	14	1				
Pattern of menstrual cycle									

Regular	64	15	21	26	2			
Irregular	1	1	0	0	0	3.11	3	7.81	0.37,NS

This table shows the association between of prevalence of anemia with menstrual factors of adolescent girls. The tabulated 'א2' values were much higher than the calculated 'א2' values at 5% level of significance for all demographic variables. As well as the calculated 'p-value which were much higher than the acceptable level of significance i.e. 'p'=0.05. Duration of blood flow is found to be statistically associated with menstrual factors of adolescent girls (p=0.0001). Hence it is interpreted menstrual factors of adolescent girls is statistically not associated with their prevalence of anemia, except the duration of blood flow.

There was no significance association between the prevalence of anemia of adolescent girls with age at menarche i.e. p =0.25. Therefore it is shows that there was no significant association between these variable. The null hypothesis was accepted for this variable and alternative hypothesis was rejected.

The association between the prevalence of anemia of adolescent girls with duration of blood flow were significant i.e. p =0.0001. Therefore it is interpreted that there was significant association between these variable. The null hypothesis was rejected for this variable and alternative hypothesis was rejected.

The association between the prevalence of anemia of adolescent girls with number of sanitary pad used per day were not significant i.e. p =0.07. Therefore it was found that there was no significant association between these variable. The null hypothesis was accepted for this variable and alternative hypothesis was rejected.

The association between the prevalence of anemia of adolescent girls with dysmenorrhea were not significant i.e. p =0.87. Hence it is interpreted that there was no significant association between these variable. The null hypothesis was accepted for these variable and alternative hypothesis was rejected.

The association between the prevalence of anemia of adolescent girls with pattern of menstrual cycle were not significant i.e. p =0.37. Hence it is interpreted that there was no significant association between these variable. The null hypothesis was accepted for these variable and alternative hypothesis was rejected.

Table 7: Association of dietary factors with prevalence of anaemia of adolescentgirls
n=150

Dietary Factors	Frequency	Normal Anemia	Mild Anemia	Moderate Anemia	Severe Anemia	א2-value	df	א2-tabval	p-value
Frequency of taking junk food									
Nil	145	35	50	57	3				
Daily	5	0	3	2	0	2.10	3	7.81	0.55,NS
Frequency of taking milk									
Nil	142	32	51	56	3				
Daily	8	3	2	3	0	1.15	3	7.81	0.76,NS
Frequency oftaking meal									
One Time	3	1	1	1	0				
Two Time	87	21	32	31	3				
Three Time	60	13	20	27	0				

More than three times	0	0	0	0	0	3.34	6	12.59	0.76,NS
Daily Breakfast									
Yes	112	27	42	40	3	3.19	3	7.81	0.36,NS
No	38	8	11	19	0				
Daily Fruits									
Yes	10	4	3	3	0	1.81	3	7.81	0.61,NS
No	140	31	50	56	3				
Fasting									
Never	141	33	50	55	3	0.27	3	7.81	0.96,NS
2 days in a week	9	2	3	4	0				
4 days in a week	0	0	0	0	0				
More than 4 days	0	0	0	0	0				
During fasting do you take fast food in between									
Yes	9	2	4	3	0	0.50	3	7.81	0.91,NS
No	141	33	49	56	3				
Frequency of tea/coffee									
Nil	47	9	15	23	0	3.71	3	7.81	0.29,NS
Daily	103	26	38	36	3				

This table shows the association of prevalence of anemia with dietary factors of adolescent girls. The tabulated 'א2' values was much higher than the calculated 'א2' values at 5% level of significance for all demographic characteristics. Also, the calculated 'p-value that was significantly higher than the acceptable level of significance i.e. p'=0.05. Therefore, it shows the dietary factors of adolescent girlsis statistically not associated with their prevalence of anemia.

The association between the prevalence of anemia of adolescent girls with the frequency of taking junk food was no significant i.e. p =0.55. That's why it was found to be a non-significant association between these variables. The null hypothesis was acceptedfor this variable.

The association between the prevalence of anemia of adolescent girls with frequency of taking milk was not significant i.e. p =0.76. So, it is found that there is no significant association between these variables. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with frequency of taking meals was no significant i.e. p =0.76. The findings show there were no significant association between these variables. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with daily breakfast was not significant i.e. p =0.36. Therefore, it is interpreted that there was no significant association between these variables. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with daily fruitswas not significant i.e. p =0.61. Therefore, the interpretations of the analysis shows there was no significant association between these variables. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with fasting was not significant i.e. p =0.96. Hence these findings show no significant association between these variables. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with during fasting do you take fast food in between were not significant i.e. p =0.91. Hence it is found to be non-significant association between these variable. The null hypothesis was accepted for this variable.

The association between the prevalence of anemia of adolescent girls with frequency of tea/coffee was not significant i.e. p =0.29. Therefore, it is interpreted that there was no significant association between these variable. The null hypothesis was accepted for this variable.