RESULTS

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The aim of the study was to assess the risk factors encountered during pregnancy among pregnant women with IDA. The results of the current study are collected, tabulated, statistically analyzed and prescribed in the following sections, tables and charts.

Finding of this study are presented in the following parts:

Section I: - covering the following:

Clinico-epidmiological characteristics of the pregnant women: table 1.

Distribution of Pregnant Women according to Current pregnancy: table 2.

Section II: covering the following:

Distribution of the pregnant women regarding life style: table 3

Distribution of pregnant women according to side effects of Iron Supplementation: figure 6.

Distribution of Pregnant Women as Regards Total Knowledge about IDA: table 4.

Section III: covering the following:

Relation between Clinico-Epidemiological Data and Degree of Iron Deficiency Anemia (IDA) among Pregnant Women: table 5.

Relation between Life Style and Degree of Iron Deficiency Anemia (IDA) among Pregnant Women: table 6.

Relation between Total Knowledge score and Degree of Iron Deficiency Anemia (IDA) among pregnant women: table 7

Section VI: covering the following:

Multiple Regressions Analysis and Risk Factors for Degree of IDA during Pregnancy: table 1 .

Section I: Clinico-Epidemiological Data of Pregnant Women:

Table (1): Distribution of Pregnant Women According to Personal Characteristics (n = 100).

Personal Characteristics	No.	(%)
Age groups (years)		
<20	10	10.0
20 – 30	65	65.0
≥ 30	25	25
Mean ± SD = 27.63 ± 5.27		
Gravidity		
< 4	85	85.0
≥ 4	15	15.0
Mean ± SD = 3.0 ± 1.71 **Range:** 1 – 12		
Parity		
< 4	99	99.0
≥ 4	1	1.0
Mean ± SD = 1.52 ± 1.28 **Range:** 0 – 8		
Level of education		
Illiterate	10	10.0
Primary	18	18.0
Secondary	46	46.0
University	26	26.0
Occupation		
Working	29	29.0
Not working	71	71.0
Residence		
Rural	63	63.0
Urban	37	37.0

Cont. Table (1): Distribution of Pregnant Women According to Personal Characteristics (No. = 100)

Personal Characteristics	No.	(%)
Family size (members)		
2-	52	52.0
4-	45	45.0
≥6	3	3.0
Hemoglobin level (mg/dl)		
10.5 – 11 mg/dl (Mild Anemia)	23	23.0
8 – 10.5 mg/dl (Moderate Anemia)	58	58.0
< 8 mg/dl (Sever Anemia	19	19.0
Mean ± SD = 9.64 ± 0.70		
BMI (Kg/m^2)		
Obese (≥ 30 Kg/m^2)	43	43
Over weight (25 - 29.9 Kg/m^2)	35	35
Health weight (18.5 – 24.9Kg/m^2)	15	15
Morbidity obese (≥ 40 Kg/m^2)	7	7
Mean ± SD = 30.57 ± 5.36		
Family income(pounds)		
Mean + SD = 800.50 + 213.14		
Blood pressure(120 ± 20/80 ± 15)		
Normal	62	62
Hypertension	24	24
Hypotension	14	14
Pulse (60-90 b/m)		
Normal	69	69
Tachycardia	24	24
Bradycardia	7	7

Table (1), showed that, more than half of studied sample 65% was in age group of 20-30 years old with mean 27.63 ± 5.27 years. Most of the studied sample 85.0% had less than four gravida, while less than one fifth of them 15.0% had multi-gravida.

As regard to the woman's education level, less than half 46% had secondary level of education and more than three fifths 71.0 % were not working, and lived in rural area. As well as, less than one-half 45 % had four members in their family. The same table showed that, more than half of the studied pregnant women 62%, 69% had normal blood pressure, and pulse (80b/m), respectively.

Figure (3): Distribution of Pregnant Women Concerning their Hemoglobin Level (No. = 100)

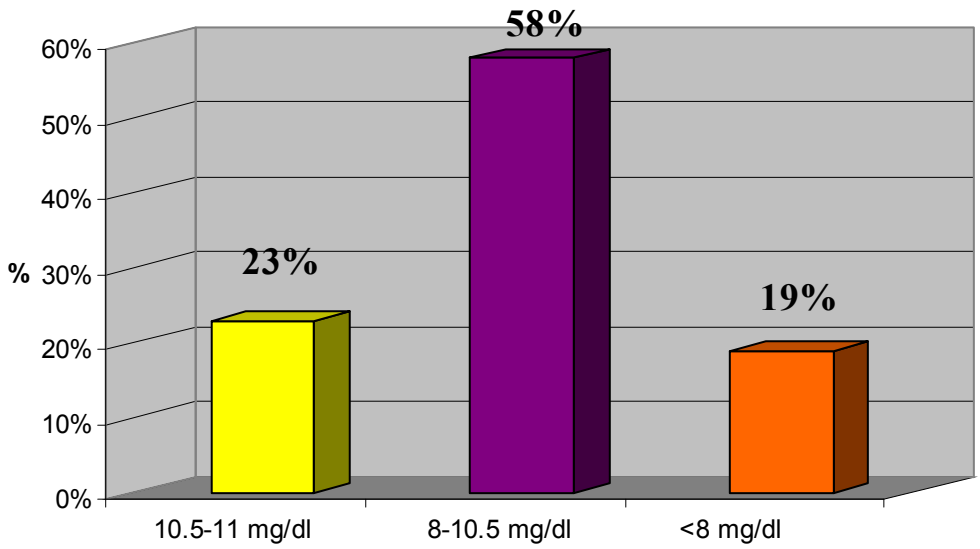

Figure (3): showed that more than one half 58% of studied sample had moderate anemia (8-10.5) mg/dl, and less than one quarter 23% of them had sever anemia (<8 mg/dl).

Figure (4): Distribution of Pregnant Women Regarding to Body Mass Index (BMI) (No. = 100)

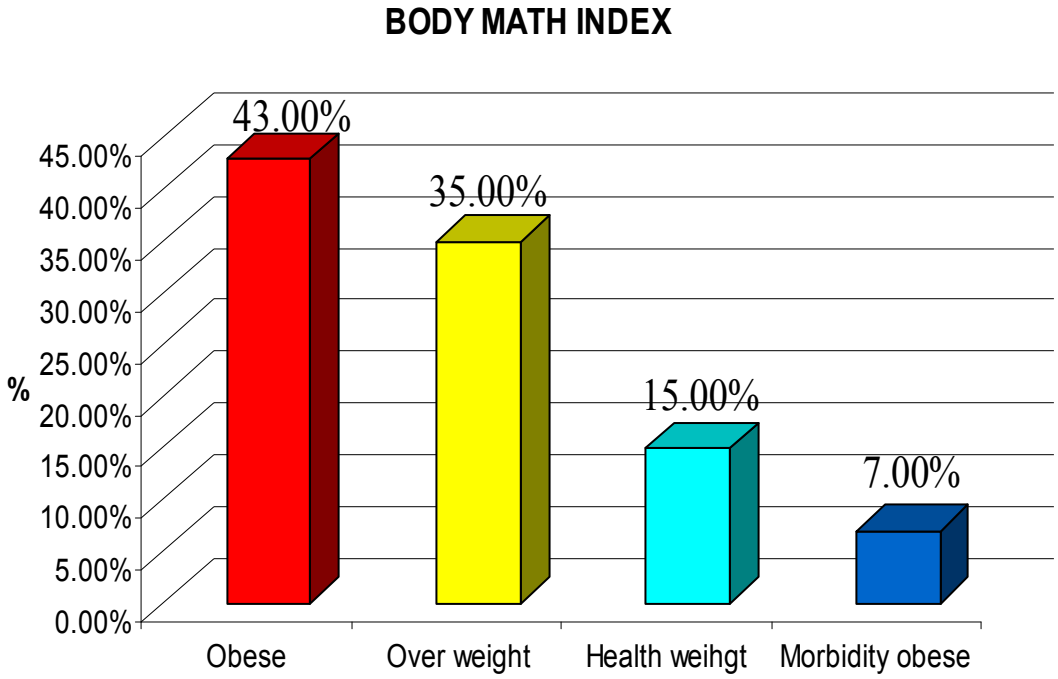

Figure (4): showed that, more than two fifths 43% of studied pregnant women were obese (≥ 30) Kg/m^2, however minority 7.00% had morbidity obese (≥ 40) Kg/m^2).

Table (2): Distribution of Pregnant Women according to Current pregnancy (No. = 100)

Item	No.	%
Present complaint		
Headache	84	84.0
Fatigue	99	99.0
Dyspnea	48	48.0
Dizzness	68	68.0
Tachy-cardia	41	41.0
Numbeness	37	37.0
Parity number		
Prim Para	25	25.0
Para 1	24	24.0
Para 2	33	33.0
≥ 4	18	18.0
Gestational age (weeks)		
First trimester	14	14.0
Second trimester	14	14.0
Third trimester	72	72.0
Mean± SD = 28.03 ± 9.71		
Spacing between pregnancy (years)		
1 year	19	19.0
2-	33	33.0
4-	22	22.0
Non(prime Para)	25	25.0
Multiple pregnancy	11	11.0

Table (2) showed that, 99% of pregnant women were fatigue and more than one fourth had numbness.

On the same table, more than two third of studied sample were in third trimester of their gestational age with mean (28.03 ± 9.71), and less than one fifth 19% had one year spacing between pregnancy while one third 33% had 2-3 years.

Figure (5): Distribution of pregnant Women according to Signs and Symptoms of IDA (No. = 100)

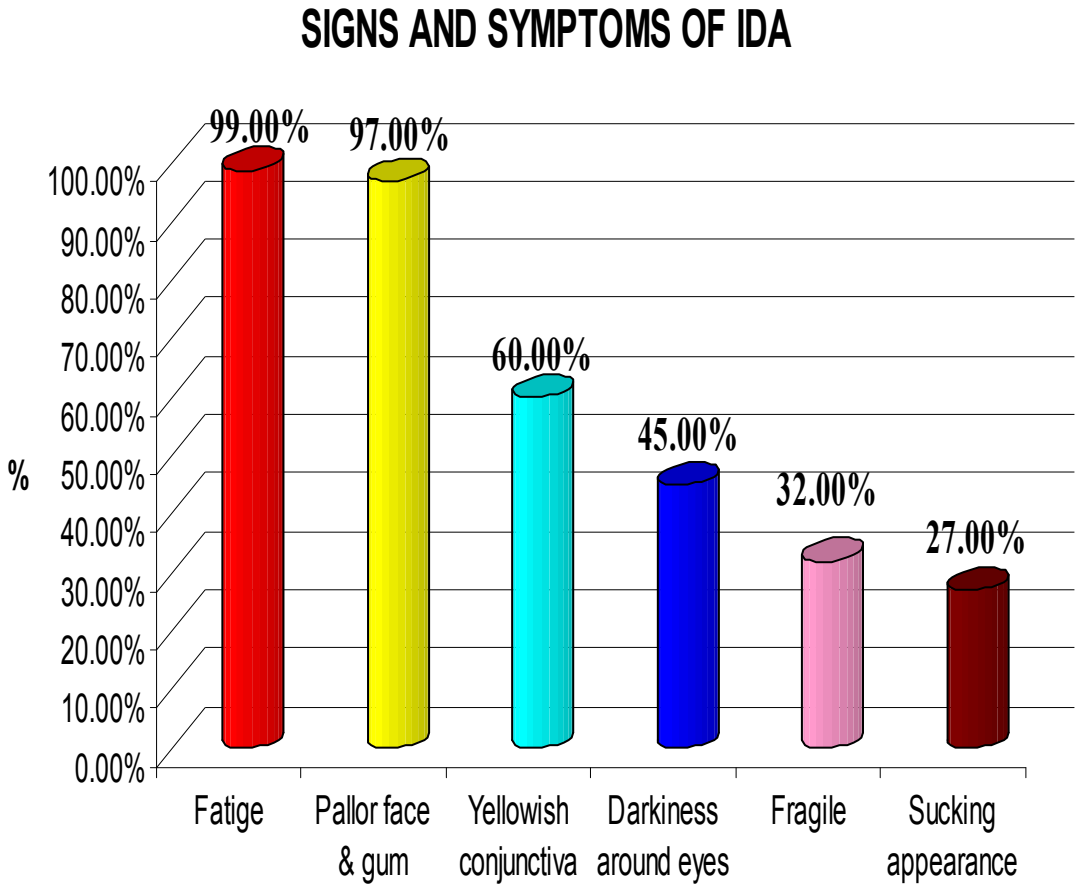

Figure (5): portrayed that most of pregnant women had fatigue, and pallor face and gum, 99%, 97%, respectively.

Section II: Risk factors for IDA during pregnancy:

Table (3): Distribution of the pregnant women regarding life style (No. = 100).

Item	No.	%
1. Regularity of intake meal		
Yes	**40**	**40.0**
No	**60**	**60.0**
2.Frequency of intake meat (per month)		
Not eating meat	**8**	**8.0**
1-	**36**	**36.0**
3-	**40**	**40.0**
5 or more	**24**	**24.0**
3. Frequency of intake green vegetables, and fruits (per week)		
1-	**23**	**23.0**
3-	**40**	**40.0**
5 or more	**37**	**37.0**
4. Frequency of intake beans (per week)		
Not eating beans	**5**	**5.0**
1-	**39**	**39.0**
3-	**39**	**39.0**
5 or more	**17**	**17.0**
5.Drinking tea with meals		
Yes	**61**	**61.0**
No	**39**	**39.0**
6.Intake of iron supplementation		
Yes	**60**	**60.0**
No	**40**	**40.0**
7. Taking iron supplementation (No. 60)		
Regular	**41**	**24.6**
Irregular	**19**	**11.4**
8- parasitic infestation		
Positive	**40**	**40.0**
Negative	**60**	**60.0**

Table (3), illustrated that, three fifths 60% of studied sample taken her meal irregular, and two fifths 40% intake meat 3-4 times per month. Additionally, more than one-fifth 23% intake green vegetables one times per week, and less than two-fifths 39% intake beans 3-4 times per week.

The same table showed that, more than two thirds of studied sample 61% was drink tea with meals, and more than one third had taken iron supplementation irregular.

Figure (6): Distribution of pregnant women according to side effects of Iron Supplementation:

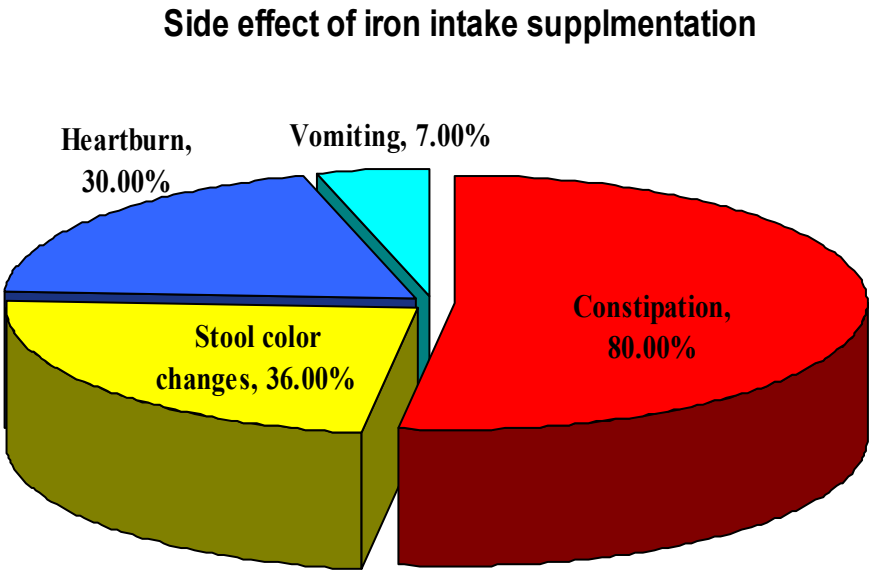

Figure (6): showed that, more than three quarters 80% of studied sample had constipation, in addition to less than one quarter 7% of the study complains from vomiting as side effect of iron supplementation.

Table (4): Distribution of Pregnant Women as Regards Total Knowledge about IDA (No. = 100)

Item	Satisfactory		Unsatisfactory	
	No	%	No	%
1- Importance of iron supplementation	32	32.0	68	68.0
2- Food rich with iron	30	30.0	70	70.0
3- Elements which prevent absorption of iron	21	21.0	79	79.0

Table 4: showed that more than two thirds of studied sample (68%) had unsatisfactory knowledge about the importance of iron supplementation, while less than three fourths of the sample (70%) had unsatisfactory knowledge about food which reached with iron, and more than three quarters of the sample (79%) had unsatisfactory knowledge about elements which prevent absorption of iron supplementation.

Figure (7): Total Pregnant Women's Knowledge Score regarding IDA

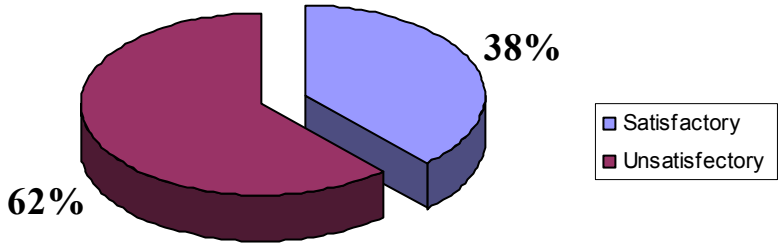

Figure (7): revealed that less than two-thirds 62% of pregnant women had unsatisfactory total knowledge score about IDA.

Section III: Relation between Variables in the Study:

Table (5): Relation between Clinico-Epidemiological Data and Degree of Iron Deficiency Anemia (IDA) among Pregnant Women (No. = 100)

Demographic / Parameter	Mild Hb (n = 23)		Moderate Hb (n = 58)		Severe Hb (n = 19)		$\chi 2$ =	P
	No	%	No	%	No	%		
Age								
< 20y	2	8.7	7	12.1	1	5.3	0.802	0.938
20-30y	15	65.2	37	63.8	13	68.4		
> 30y	6	26.1	14	24.1	5	26.3		
Mean ± SD	26.74 ± 5.68		27.91 ± 5.43		27.84 ± 4.29			
Education								
Illiterate	3	13	6	10.3	1	5.3	1.876	0.931
Primary	5	21.7	10	17.2	3	15.8		
Secondary	11	47.8	26	44.8	9	47.4		
University	4	17.4	16	27.6	6	31.6		
Occupation								
Working	4	17.4	19	32.8	6	31.6	1.965	0.374
Not working	19	82.6	39	67.2	13	68.4		
Residence								
Rural	19	82.6	34	58.6	10	52.6	5.147	0.076
Urban	4	17.4	24	41.4	9	47.4		
Parasitic infestation	10	2.3	18	10.44	12	2.28	22.319	0.000**
Parity								
Prim para	3	69.0	15	8.7	7	1.33	9.745	0.008**
Para 1	7	1.6	13	7.8	4	0. 76		
Para2	10	2.3	19	11. 2	4	0. 76		
≥ 4	3	0. 69	11	6. 38	4	0. 76		
Gestational age								
First trimester	1	4.3	10	17.2	3	15.8	3.637	0.457
Second trimester	5	21.7	6	10.3	3	15.8		
Third trimester	17	73.9	42	72.4	13	68.4		
Spacing between pregnancy								
None	3	69.0	15	8.7	7	1.33	10.278	0.036*
< 3y	15	3.45	26	15.08	11	2.09		
> 3y	4	17.4	17	29.3	1	5.3		

(**) Highly statistical significant at $P \leq 0.001$

(*) Statistical significant at $P \leq 0.05$

Table (5): showed statistically significant relation between degree of Iron deficiency anemia and parasitic infection of the pregnant women, spacing between pregnancy at p value = 0.036, Parity's number, at p value = 0.008. and there was no statistically significant relation between Iron Deficiency anemia and age, educational level, occupation, residence of the pregnant women.

Table (6): Relation between Life Style and Degree of Iron Deficiency Anemia (IDA) among Pregnant Women (No. = 100)

Demographic / Parameter	Mild IDA (n = 23)		Moderate IDA (n = 58)		Severe IDA (n = 19)		$\chi 2$	P
	No	%	No	%	No	%		
Frequency of eating meat (month)								
0-1 month	6	26.1	47	81	10	52.6	12.072	0.017*
2-5 months	12	52.2	5	8.6	7	36.8		
> 6 months	5	21.7	6	10.3	2	10.5		
Frequency of eating vegetable & fruits (week)								
0-1 week	0	0	48	82.8	10	52.6	23.180	0.000***
2-5 weeks	12	5.2	3	5.2	5	26.3		
> 6 weeks	11	47.8	7	12.1	4	21.1		
Frequency of eating beans (week)								
0-1 week	6	26.1	41	70.7	10	52.6	12.745	0.013*
2-5 weeks	15	65.2	15	25.9	3	15.8		
> 6 weeks	2	8.7	2	3.4	6	31.6		
Drinking Tea	13	56.5	39	67.2	9	47.4	2.628	0.269
Iron intake								
Yes	15	65.2	40	69	5	26.3	11.186	0.004***
No	8	34.8	18	31	14	73.7		
Regularity of taking iron supplementation								
No	8	34.8	18	31	14	73.7	11.459	0.022*
Regular	11	47.8	27	46.6	3	15.8		
Irregular	4	17.4	13	22.4	2	10.5		

(**) Highly statistical significant at $P \leq 0.001$

(*) Statistical significant at $P \leq 0.05$

Table (6): showed highly statistically significant relation between degree of Iron deficiency anemia and life style of pregnant women regarding frequency of intake vegetable & fruits, at p value = 0.000, iron intake, at p value = 0.004, frequency of intake meat (month)**,** at p value = 0.017, frequency of intake beans, at p value = 0.013, regularity of taking iron supplementation, at p value = 0.02 and there was no statistically significant relation between Iron Deficiency anemia and drinking tea.

Table (7): Relation between Total Knowledge score and Degree of Iron Deficiency Anemia (IDA) among pregnant women (No. = 100)

Total Knowledge Score	Mild IDA **(n = 23)**		Moderate IDA **(n = 58)**		Severe IDA **(n = 19)**		$\chi 2$	**P**
	No	%	No	%	No	%		
Satisfactory	5	21.7	31	53.4	8	42.1	6.755	0.034*
Unsatisfactory	18	78.3	27	46.6	11	57.9		

(**) Highly statistical significant at $P \leq 0.001$

(*) Statistical significant at $P \leq 0.05$

Table (7): showed statistically significant relation between degree of Iron deficiency anemia and total knowledge score of the pregnant women, at p value = 0.034.

Section VI: Multiple Regressions Analyze and Risk Factors for Degree of IDA during Pregnancy:-

Table (8): Multiple Regressions Analyze and Risk Factors for Degree of IDA during Pregnancy:-

Item	**Wald**	**P value**	**Odds ratio**	**95.0% C.I.**
Parity number	0.830	0.362	0.667	0.280 – 1.593
Spacing between pregnancy	0.379	0.538	0.862	0.538 – 1.382
Frequency of intake meat				
0-1 /month	2.663	0.264		
2-5/ month	0.589	0.443	2.720	0.211 – 35.041
> 6/ month	0.320	0.572	0.452	0.029 – 7.064
Frequency of intake fruit and vegetables				
0-1 / week	7.904	0.019*		
2-5 / week	7.144	0.008**	96.759	3.385 – 2765.634
> 6 / week	1.508	0.219	4.998	0.383 – 65.149
Frequency of intake beans				
0-1 / week	11.874	0.003**		
2-5 / week	8.645	0.003**	0.004	0.000 – 0.158
> 6 / week	11.439	0.001**	0.008	0.001 – 0.133
Iron intake	4.618	0.032*	0.123	0.018 – 0.832

(**) Highly statistical significant at $P \leq 0.001$

(*) Statistical significant at $P \leq 0.05$

Conti-Table (8): Multiple regressions analysis and risk factors for degree of IDA during pregnancy:-

Item	Wald	P value	Odds ratio	95.0% C.I.
Education				
Illiterate	2.384	0.497		
Primary	1.619	0.203	15.601	0.227 – 1073.850
Secondary	.953	0.329	4.498	0.220 – 92.095
University	2.298	0.130	6.603	0.575 – 75.786
Family income (pound)	6.223	0.013*	1.004	1.001 – 1.007
Parasitic infestation	0.156	0.693	1.783	0.101 – 31.405
Total knowledge score	0.010	0.919	1.012	0.807 – 1.268
Age				
≤ 20y	2.347	0.309		
20-30y	1.856	0.173	0.080	0.002 – 3.023
> 30y	1.774	0.183	0.295	0.049 – 1.778

(**) Highly statistical significant at $P \leq 0.001$

(*) Statistical significant at $P \leq 0.05$

Table (1) showed highly statistically significant relation between degree of Iron deficiency anemia and life style of pregnant women regarding frequency of intake vegetable & fruits, at p value = 0.008, frequency of intake beans, at p value = 0.003. Additionally, there was statistically significant relation between degree of Iron deficiency anemia and iron intake at p value = 0.032, family income at p value = 0.013.