RESULTS

The study covered 200 students, 101 females and 99 males. Urban residents were 111 students compared to 89 rural resident students. The results are presented in the following sequence:

Part I: Sociodemegraphic characteristics, dietary environment and student's health status (Tables1-5).

Part II: Knowledge about adolescence (Tables 6-7).

Part III: Knowledge about nutrition (Tables 8-11).

Part IV: Knowledge about adequate nutritional practice and students' attitude (Tables 12-14).

Part V: Students' habits & behavior toward nutrition (Tables 15-17).

Part VI: Correlation of total knowledge of students (Table 18-20).

Part I: Sociodemegraphic characteristics, dietary environment and student's health status.

Table (1):- The sociodemographic characteristics of the study subjects by residence.

Residence / Characteristics	Urban (111) No	%	Rural(89) No	%	Total(200) No	%
Sex						
Male	49	44.1	50	55.2	99	49.5
Female	62	55.9	39	44.8	101	50.5
Total	111	100.0	89	100.0	200	100.0
	X^2= 1.93		P > 0.05			
Scholastic period						
Morning	80	72.1	26	29.2	106	53.0
Afternoon	31	27.9	63	70.8	94	47.0
Total	111	100.0	89	100.0	200	100.0
	X^2 = 34.72		P <0 .001			

The table showed that less than half of studied group (49.5%) were males compard to more than half (50.5%) females. This difference was not statistically significant (P>0.05).

More than half (53%) of students attended morning shifts compared to less than half (47%) students in afternoon shifts. The frequency of morning shifts in urban schools was higher than rural schools. This difference was statistically significant (P <0.001).

Figure (I): Multiple bar chart showing distribution of students according scholastic shift by residence

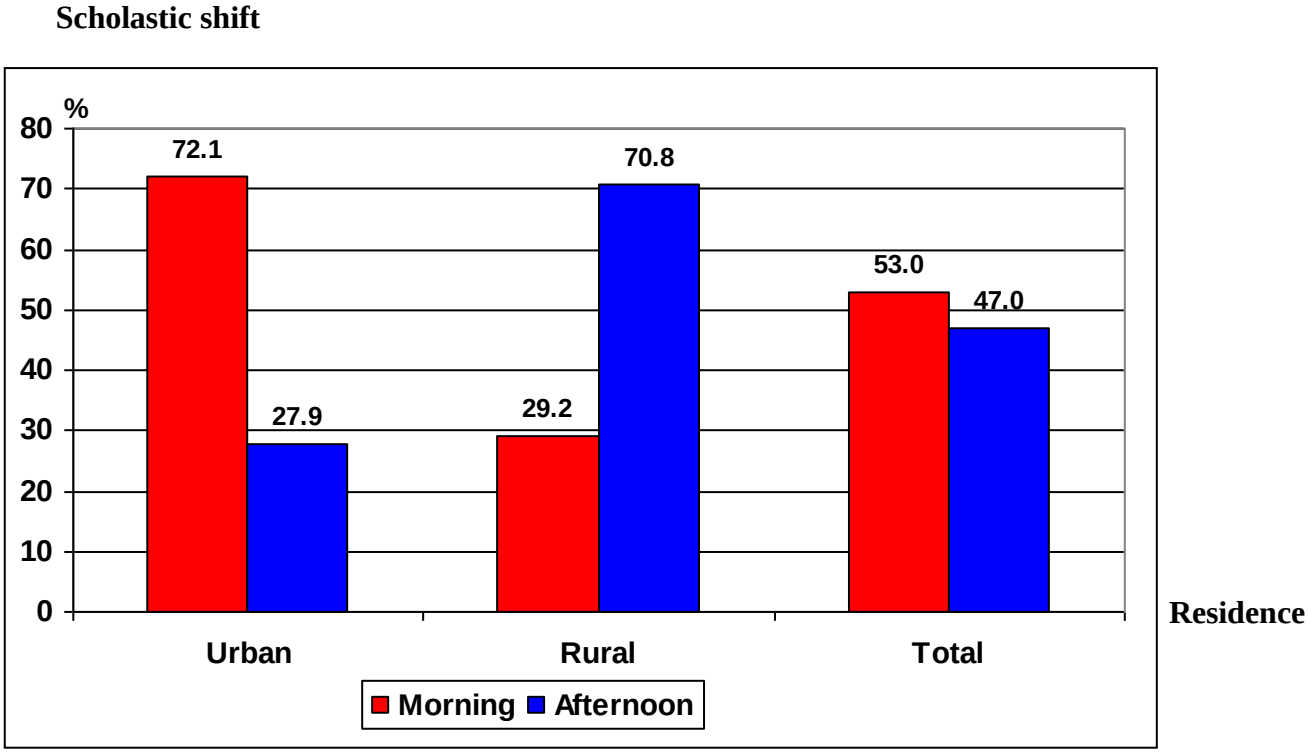


Table (2):- Distribution of students according to socioeconomic data for family income and percent of family income spent on diet in relation to sex and residence.

Sex / Socioeconomic data	Male (99) No	%	female (101) No	%	Urban (111) No	%	Rural (89) No	%	Total (200) No	%
Family income (Pounds)										
< 200	13	13.1	12	11.9	9	7.6	16	17.9	25	12.5
200 –	14	14.2	21	20.8	16	14.2	19	21.4	35	17.5
400-	20	20.2	28	27.7	22	20.1	26	29.2	48	24.0
> 600	52	52.6	40	39.6	64	58.1	28	31.5	92	46.0
Total	99	100	101	100	111	100.0	89	100.0	200	100.0
	$X^2 = 6.177$		P < 0.05		$X^2 = 14.39$		P < 0.001			
Percent of family income spent in diet/ l.e.										
↓ 50%	18	18.2	14	13.9	15	13.2	17	18.6	32	16.0
50%	40	40.4	51	50.5	50	45.3	41	46.5	91	45.5
↑ 50%	41	41.4	36	35.6	46	41.5	31	34.9	77	38.5
Total	99	100	101	100	111	100.0	89	100.0	200	100
	$X^2 = 1.71$		P > 0.05		$X^2 = 2.65$		P > 0.05			

The table showed that more than two third of the total sample (69%) had income ≥ 400L.E. 1 Month this frequency was slightly higher in urban than rural and in male than female.

This frequency was significant to residence and not significance related to sex.

Also showed less than half (45.5%) of students spend half of family income on food this frequency slightly higher in urban than rural and in female than males this frequencies weren't statistically significant.

Figure (II): Multiple bar chart showing distribution of students according family income by residence

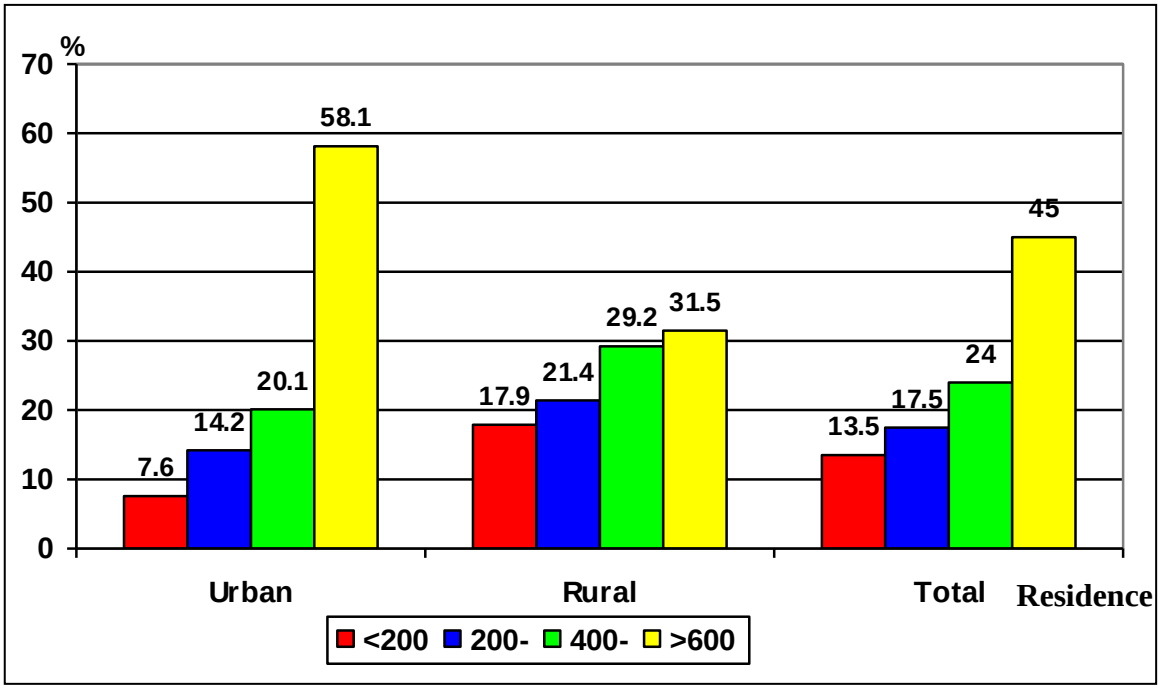


Table (3):- Mean and stander division of students house appliances and score of dietary environment in relation to residence.

Residence house characteristic	Urban (111) Mean ±S.D.	Rural (89) Mean ±S.D.	Total (200) Mean ±S.D.	t	p
Appliances	9.50 ± 2.16	7.94 ±2.33	8.81 ±2.3	4.89	< 0.001
Dietary environment	13.6 ± 1.13	11.96 ±1.92	12.5 ±1.6	5.17	<0 .001

The table showed that the total mean of house appliances were (8.81±2.3) there are the mean slightly higher in urban than rural (9.5±2.16, 7.94±2.33 respectively). The dietary environment score was (12.5±1.6) as the mean of total sample. (13.6±1.13) in urban and (11.96±1.92) in rural area.

The percent of house appliances was 9.5 / 15 = 63.3% in urban area compared to 7.9 / 15 = 52.6% in rural area where the dietary environment in urban area was 13.6 / 14 = 97.1% compared as 11.9 / 14 = 85% in rural area.

These differences were statistically significant (P< 0.001).

Table (4): Mean and stander division of physical health status of students in relation to residence

Residence / Physical status	Urban (111) Mean	±S.D	Rural (89) Mean	±S.D	Total (200) Mean	±S.D	t	P
Body mass index	22.6	±2.2	22.6	±10.4	22.6	±7.5	0.16	>0.05
HB. %	77.4	±6.6	76.7	±5.9	77.17	±6.3	0.78	>0.05
Visual acuity								
Healthy	74	66.7	69	77.5	143	71.5	X^2=2.35	P>0.05
Un healthy	37	33.3	20	22.5	57	28.5		
Total	111	100	89	100	200	100		
Teeth health								
Healthy	64	57.7	57	64	121	60.5	X^2=0.597	P>0.05
Un healthy	47	42.3	32	36.0	79	39.5		
Total	111	100	89	100	200	100		

The table showed that there were no statistically significance in Body mass index and HB% P>0.05.

The table also showed that the high percent of urban students had unhealthy teething. More than two fifth (42.3%) and more than one third (33.3%) had than visual acuity problem.

The differences were not statistically significant (P>0.05)

Table (5):- Descriptive statistics of students health status in relation to sex.

Sex / Physical status	Male (99) Mean	±S.D.	Female (101) Mean	±S.D.	Total (200) Mean	±S.D.	t	P
Body mass index	22.6	±2.2	22.6	±10.4	22.6	± 7.5	0	>0.05
HB %	78.5	±.6.3	75.9	± 6.11	77.1	± 6.3	2.9	<0.01
Visual acuity								
Healthy	82	82.8	61	60.4	143	71.5	X^2=11.27	P<0.001
Un healthy	17	17.2	40	39.6	57	28.5		
Total	99	100	101	100	200	100		
Teeth health								
Healthy	64	64.6	57	65.4	121	60.5	X^2=1.088	P>0.05
Un healthy	35	35.4	44	43.6	79	39.5		
Total	99	100	101	100	200	100		

The table showed that no difference in the mean of body mass index in male and female , the mean of HB% of males were 78.5 ±6.3 and in female was 75.9±6.11.

The difference was statistically significance in HB% P<0.05.

The table also showed that more than one fourth of student (28.5%) had vision problem and less than two fifth (39.5%) had unhealthy teething .

The differences were statistically significance in vision health p<0.01.

Part II: Knowledge about adolescence.

Table (6):- Distribution of students according to their knowledge about adolescence in relation to residence.

Residence / Adolescence knowledge	Urban (111) No	%	Rural (89) No	%	Total (200) No	%
Adolescence definition						
Poor	54	48.6	53	59.6	107	53.5
Average	34	30.6	30	33.7	64	32.0
Good	23	20.8	6	6.7	29	14.5
Total	111	100.0	89	100.0	200	100.0
	$X^2 = 10.7$		P <0.001			
Adolescence stage						
Poor	93	83.8	64	71.9	157	78.5
Good	18	16.2	25	28.1	43	21.5
Total	111	100.0	89	100.0	200	100.0
	$X^2 = 3.94$		P = 0.05			
Adolescence age						
Female						
Poor	104	93.7	84	94.4	188	94.0
Good	6	6.3	5	5.6	12	5.0
Total	111	100.0	89	100.0	200	100.0
	$X^2 = .13$		P > 0.05			
Male						
Poor	106	95.5	84	94.4	190	95.0
Good	5	4.5	5	5.6	10	5.0
Total	111	100.0	89	100.0	200	100.0
	X2 =.13		P >0.05			
Adolescent nutritional need						
Poor	59	53.1	53	59.5	112	56.0
Good	52	46.9	36	40.5	88	44.0
Total	111	100.0	89	100.0	200	100.0
	$X^2 = .82$		P >0.05			

The table showed that more than half of students had poor knowledge about definition of adolescence, adolescence stage, adolescent age of male and female and adolescent's nutritional needs. This poor knowledge ranged from (53.5% to 95%). Students with good knowledge ranged from (5%-44%).

The differences were statistically significant in adolescence definitions ($P< 0.05$).

Table (7):- Distribution of students according to their knowledge about adolescence in relation to sex

Sex / Adolescence knowledge	Male (99) No	%	Female(101) No	%	Total(200) No	%
Adolescence definition						
Poor	60	60.6	47	46.5	107	53.5
Average	32	32.3	32	31.7	64	32.0
Good	7	7.1	22	21.8	29	14.5
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 10.6$		P <0.001			
Adolescence stages						
Unknown	87	87.9	70	69.3	157	78.5
Known	12	12.1	31	30.7	43	21.5
Total	99	100.0	101	100.0	200	100.0
	X=11.3		P <0.001			
Adolescence age						
Females						
Unknown	93	93.9	95	94.1	188	94.0
Known	6	5.1	6	5.9	12	6.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = .067$		P >0.05			
Males						
Unknown	91	91.9	99	98.01	190	95.0
Known	8	8.1	2	1.98	10	5.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 3.07$		P <0.05			
Adolescent nutritional needs						
Unknown	61	61.6	51	50.5	112	56.0
Known	38	38.4	50	49.5	88	44.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 2.79$		P > 0.05			

The table showed that more than half (53.5%) of students had poor knowledge about definition of adolescence, more than three fourths (78.5%) about adolescence stages, the majorty had poor knowledge about adolescent age for females and males (94%, 95% respectively) and more than half (56%) about adolescent nutritional needs.thier good knowledge ranged from 5% to 44%.

The differences were statistically significant in adolescence definitions, adolescence stages and adolescence age for males ($P < 0.05$).

Figure (III): Multibar chart showing distribution of students knowledge about adolescence definition by residence

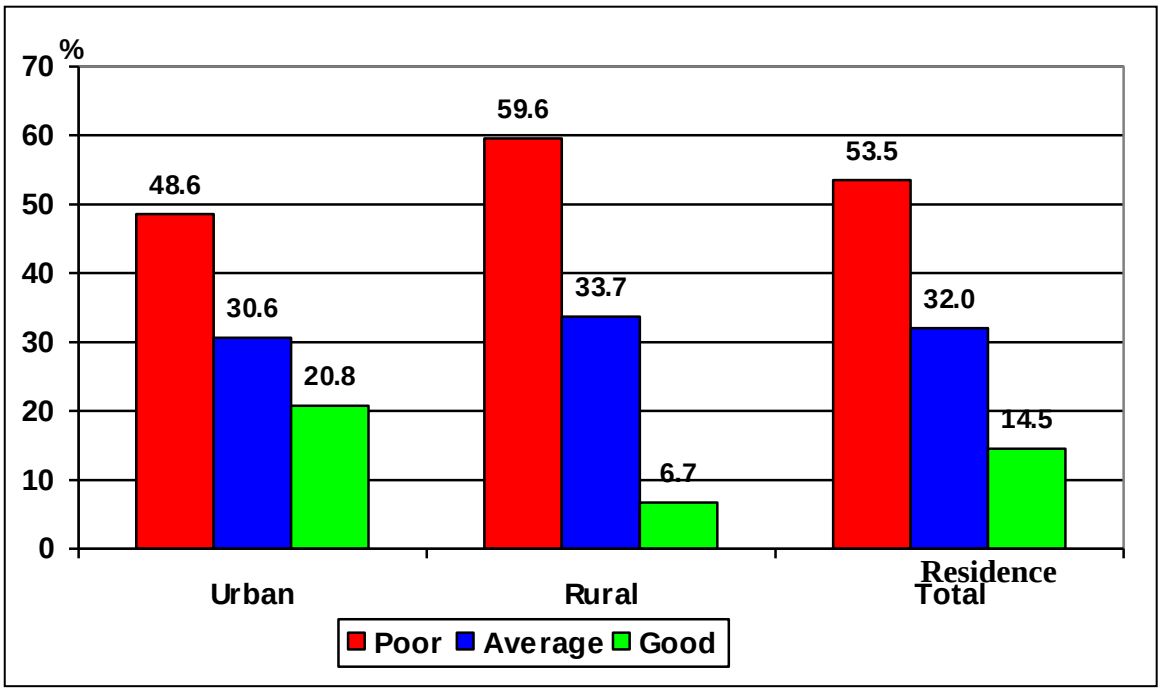
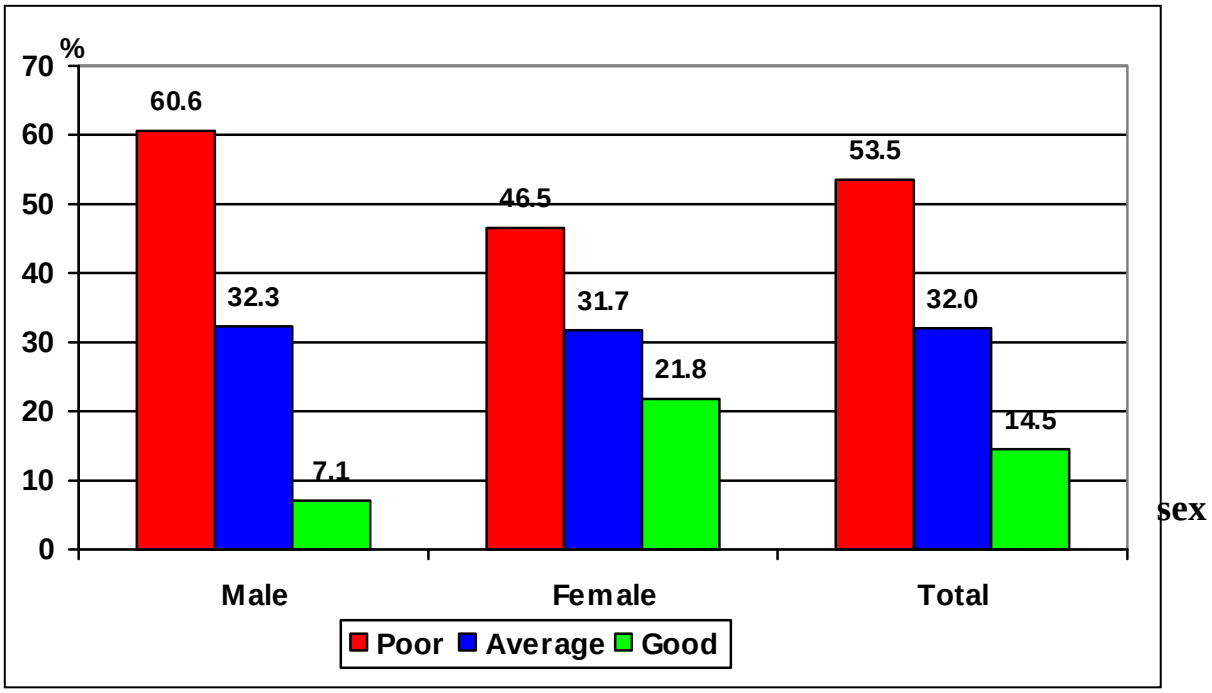


Figure (IV): Bar chart showing distribution of student's knowledge about adolescence definition by sex



Part III: Knowledge about nutrition.

Table (8):- Distribution of students according to their knowledge about poor nutrition in relation to sex.

Sex / Nutritional knowledge	Male (99)		Female (101)		Total (200)	
	No	**%**	**No**	**%**	**No**	**%**
Definition of poor nutrition						
Poor	67	67.7	50	49.5	117	58.5
Average	15	15.2	27	26.7	42	21.0
Good	17	17.1	24	23.8	41	20.5
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 7.07$		P < 0.01			
Causes of poor nutrition						
Poor	65	65.6	48	44.6	113	56.5
Average	19	19.2	38	34.7	57	28.5
Good	15	15.2	15	20.7	30	15.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 8.87$		P < 0.01			
S& S of poor nutrition						
Poor	54	54.5	45	44.6	99	49.5
Average	25	25.3	35	34.6	60	30.0
Good	20	20.2	21	20.8	41	20.5
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 2.48$		P >0.05			
Prevention of poor nutrition						
Poor	63	63.6	42	41.6	105	52.5
Average	22	22.2	36	35.6	58	29.0
Good	14	14.2	23	22.8	37	18.5
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 9.74$		P <0 .001			

As shown in table (8) half or more of students had poor knowledge about definition poor nutrition (58.5%), (56.5%) about causes of poor nutrition, (49.5%) about its manifestation and (52.5%) about methods of prevention. The rest of the sample had average or good knowledge. The lowest frequency was that the students with good knowledge (15% - 20%) of the total sample.

Generally the frequency of poor of knowledge was significantly lower in females as compared of males except of S/S of poor nutrition.

Table (9):- Mean and stander division of students according to their knowledge about definition of poor nutrition, causes of poor nutrition, sings and symptoms of poor nutrition and prevention of poor nutrition in relation to residence

Residence / Nutritional knowledge	Urban (111) Mean ±S.D	Rural (89) Mean ±S.D	Total (200) Mean ±S.D	t	P
Definition of poor nutrition	0.63 ±0.80	0.60 ±0.80	0.62 ±0.80	0.26	>0.05
Causes of poor nutrition	0.61 ± 0.75	0.55 ± 0.72	0.58 ±0.73	0.57	>0.05
S & S of poor nutrition	0.68 ±0 .77	0.74 ±0.80	0.71 ±0.78	0.54	>0.05
Prevention of poor nutrition	0.64 ±0.75	0.67 ±0.79	0.66 ±0.77	0.27	>0.05

The table showed that all of students in urban and rural had below half of mean; the higher total mean was in knowledge about sings and symptoms of poor nutrition (0.71±0.78) while the lowest was in causes of poor nutrition (0.58±0.73).The differences were not proved statistically significant (P>.05).

Figure (V): Multiple bar charts showing distribution of students knowledge about definition of poor nutrition by sex

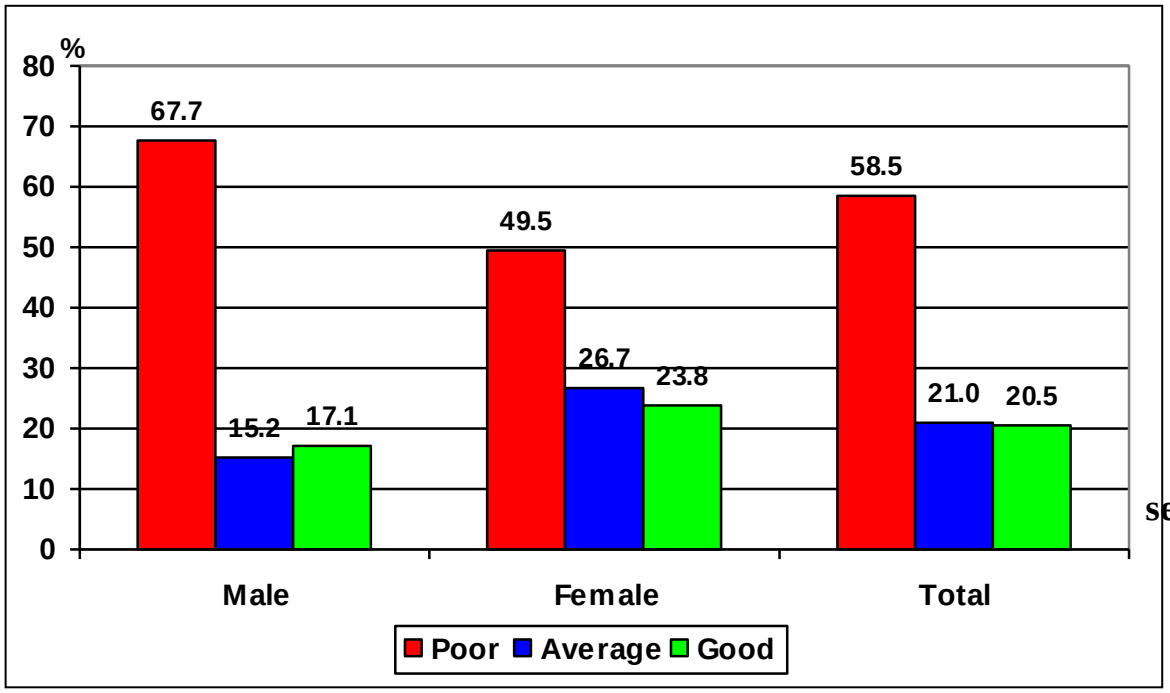


Figure (VI): Multiple bar chart showing distribution of students knowledge about causes of poor nutrition by sex

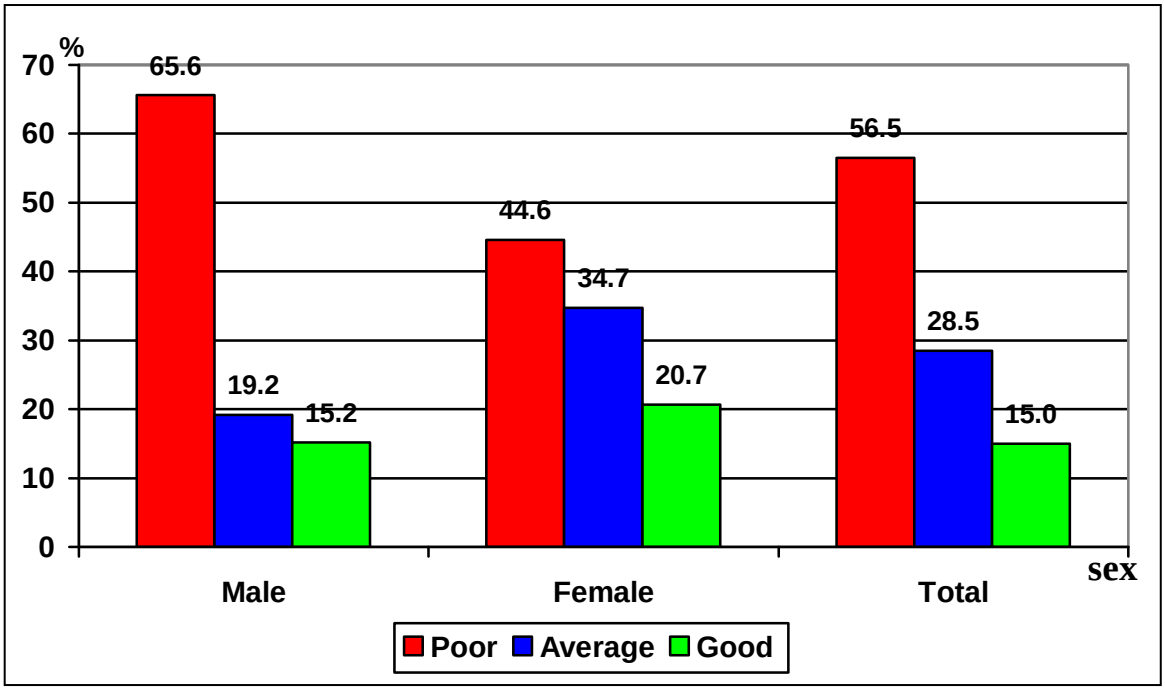


Figure (VII) : Multiple bar chart showing distribution of students knowledge about prevention of poor nutrition by sex

students knowledge about prevention of poor nutrition

sex

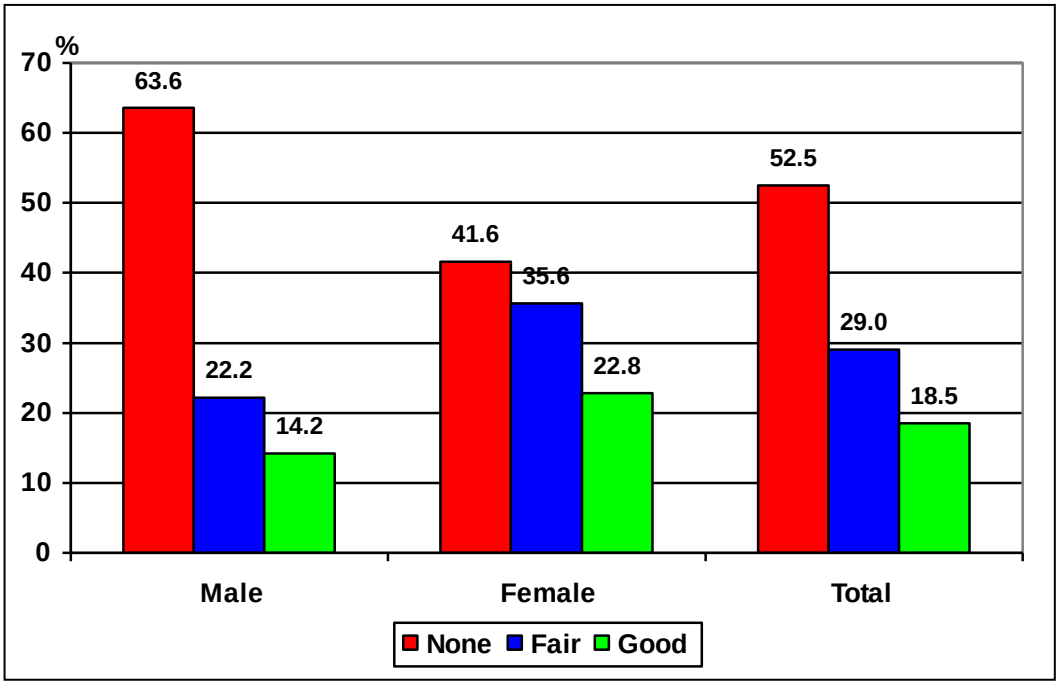


Table (10):-Mean and stander division of students knowledge about diet for vision health, teeth and bone health, anemia prevention and mental health in relation to sex.

Sex / Types of health condition	Male (99) Mean ±S.D.	Female (101) Mean ±S.D.	Total Mean ±S.D.	t	P
Vision	2.44 ±1.13	2.56 ±0.87	2.50 ±1.01	0.48	>0.05
Bone & teeth	2.83 ±0.77	2.83 ±0.82	2.83 ±0.80	0	>0.05
Anemia prevention	2.07 ±0.85	2.61 ± 0.93	2.34 ±0.93	4.33	<0.001
Mental health	2.47 ±0.93	2.67 ±0.90	2.65 ±0.92	1.54	>0.05

The table showed that the mean and stander division of student's knowledge about diet for vision health, bone and teeth health, diet prevent anemia and mental health for males and females.

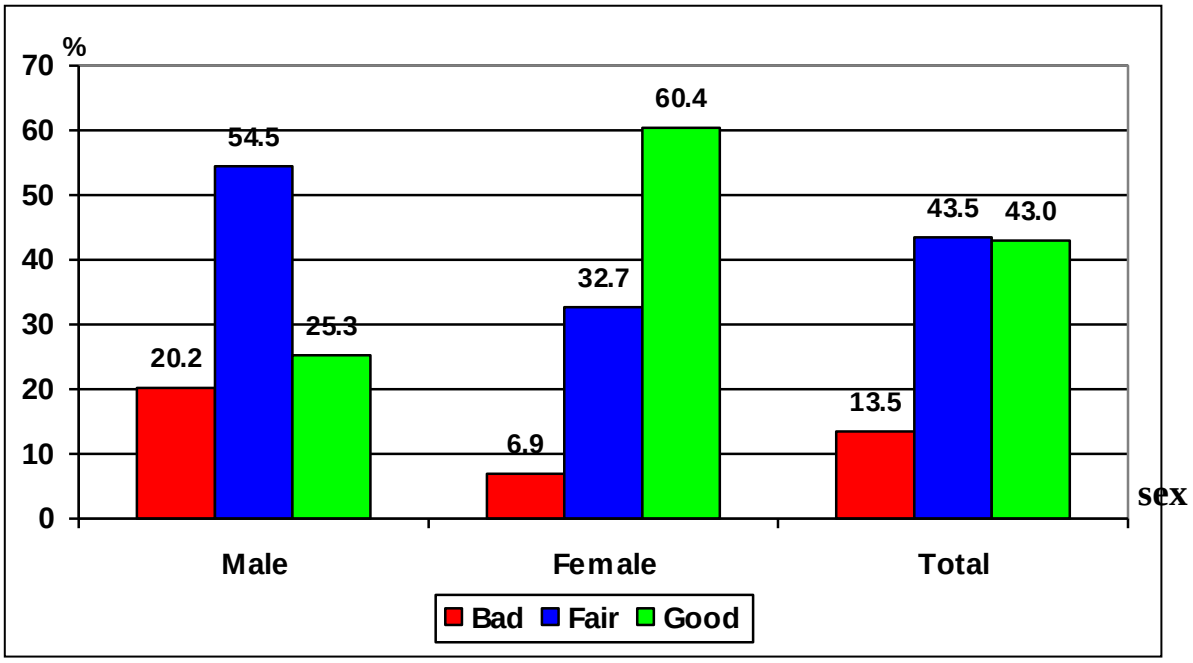
The table showed that the total mean of student knowledge ranged from (2.34±0.93 to 2.83±0.80) there are no statistical differences (P > 0.05) exept in diet prevent anemia.

Table (11):- Distribution of students according to their knowledge about food categories and structure of complete diet in relation to sex

Sex / Students knowledge	Male (99) No	%	Female (101) No	%	Total (200) No	%
food categories						
Poor	20	20.2	7	6.9	27	13.5
Average	54	54.5	33	32.7	87	43.5
Good	25	25.3	61	60.4	86	43.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 26.38$		P < 0.001			
Structure of diet						
Poor	27	27.3	9	8.9	36	18.0
Average	45	45.4	37	36.6	82	41.0
Good	27	27.3	55	54.5	82	41.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 19.323$		P < 0.001			

The table showed that the frequency of students with poor knowledge about food categories was (13.5 %) in the total sample. As for structure of diet it was (18.0 %). These frequencies were significantly lower in females as compared to males (P < 0.05).

Figure (IX): Multiple bar charts showing distribution of student's knowledge about food categories by sex



Part IV: Knowledge about adequate nutritional practice and students' attitude.

Table (12):- Mean and standard division of students attitude and practice in relation to residence.

Residence / Attitude & practice	Urban (111) Mean	±S.D.	Rural (89) Mean	±S.D.	Total(200) Mean	±S.D.	t	P
Practice	14.84	±3.15	15.84	±2.83	15.4	±3.01	2.36	<0.05
Attitude	22.56	±3.40	21.70	±3.88	22.09	±3.6	1.62	>0.05

The table showed that the attitude towared food in urban areas was better than in rural areas that was (22.56 ±3.4) as a mean in urban while in rural areas that was (21.40 ±3.88). The food practice in urban areas have mean (14.84 ± 3.15) compared to (15.84 ±2.83) in rural areas.

The percent of food practice in urban areas were 14.8 / 24 = 61.6 % compared to 15.8 / 24 = 65.8% in rural areas. While the food Attitude was 22.5 / 34 = 66.1% in urban areas compared to 21.7 / 34 = 63.8 in rural areas.

The difference in food practice was statistically significance in urban and rural ($P < 0.05$).

Table (13):- Mean and stranded division. of students food practice and attitude in relation to sex.

Sex / Attitude & practice	Male (99) Mean	±S.D.	Female (101) Mean	±S.D.	Total (200) Mean	±S.D.	t	P
Food practice	14.50	±3.99	16.27	±2.20	15.4	±3.01	4.34	< .001
Food attitude	21.87	±3.93	22.30	±3.48	22.09	±3.6	0.80	>0.05

The table showed that the females student have better food practice and attitude (16.27±2.20, 22.30±3.48 respectively) while the males have food practice and food attitude was (14.50 ±3.99, 21.87±3.93 respectively).

The table showed that the students food practice in males was 14.5 / 24 = 60% as compared of females 16.27 / 24 = 67.8% while the food attitude of males students 21.87 / 34 = 64.3% compared to 22.30 / 34 = 65.6 % of females students.

The difference was significantly in food practice and not significant in food attitude

Table (14): Comparison of food attitude and practice of students in relation hemoglobin percentage.

Hemoglobin % / Attitude & practice	↓75% Mean	±S.D	↑75 % Mean	±S.D	t	P
Practice	15.28	±2.89	15.44	±3.0	0.33	>0.05
Attitude	21.89	±4.14	22.17	±3.05	0.47	>0.05

The table showed that the highly percent of hemoglobin (↑ 75%) was that according to higher mean of practice (15.44). while the highly percentage of hemoglobin (↑ 75%) as regarded positive attitude and low percentage of hemoglobin (↓ 75%) as regarded to negative attitude and low mean of practice.

The differences were not proved statistically significance (P>0 .05).

Part V : Students' habits & behavior towards nutrition.

Table (15):- Distribution of students according to their number of meals regularity and adequacy of nutrition in relation to sex .

Sex / Diet habits	Males		Females		Total	
	No	%	No	%	No	%
No. of meals						
One	3	3.1	2	1.98	5	2.5
Two	11	11.1	19	18.81	30	15.0
Three	73	73.7	78	77.23	151	75.5
More	12	12.1	2	1.98	14	7.0
Total	99	100.0	101	100.00	200	100.0
	$X^2 = 9.62$		P < 0.01			
Regularity meal						
Irregular	49	49.5	52	51.5	101	50.5
Regular	50	50.5	49	48.5	99	49.5
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 0.07$		P > 0.05			
Adequacy of nutrition						
Less	12	12.2	34	33.7	46	23.0
Moderate	34	34.3	38	37.6	72	36.0
Enough	53	53.5	29	28.7	82	41.0
Total	99	100.0	101	100.0	200	100.0
	$X^2 = 17.75$		P < 0.001			

The table showed that more than three fourth (75.5%) of student took three meals, less than one fifth (15%) took two meals per day while the lowest frequency took only one meals (2.5%), more than half (50.5%) of the students took that diet irregularly and more then two fifth 41% of all students took adequate diet.

The difference was significant in number of meals and adequacy of nutrition ($P<0.05$) .

Figure (XI) : Multiple bar chart showing distribution of students according adequacy their nutrition by sex

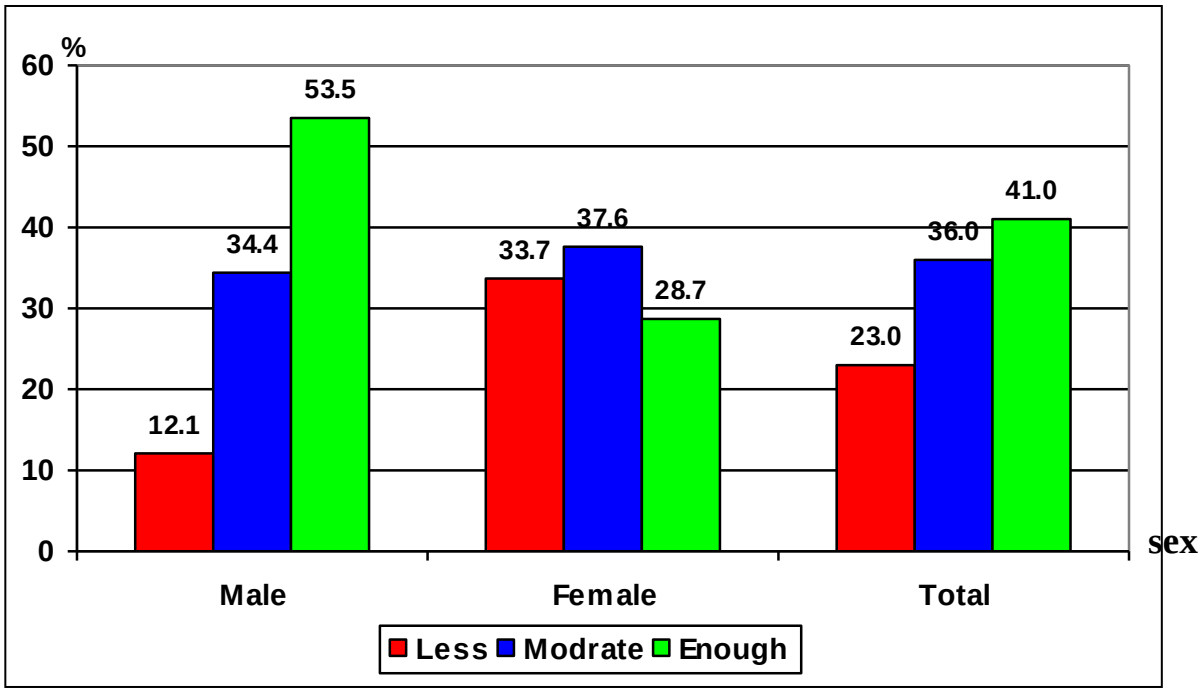


Table (16):- Distribution of students according to their behavior to diet during exam stress, weight gain, method of weight gain , weight loss, and methods of weight loss in relation to residence.

Residence / Diet behavior	Urban (111) No	%	Rural (89) No	%	Total (200) No	%
Exam stress						
Unchanged appetite	63	56.8	43	48.3	106	53.0
↑Appetite to eat	11	9.9	7	7.9	18	9.0
↓Appetite to eat	37	33.3	39	43.8	76	38.0
Total	111	100.0	89	100.0	200	100.0
	$X^2 = 2.67$		P >0.05			
Desire to gain weight						
Not agree	92	82.9	69	77.7	161	80.5
Agree	19	17.1	20	22.3	39	19.5
Total	111	100.0	89	100.0	200	100.0
	$X^2 = 0.59$		P > 0.05			
Methods of weight gain						
↑ No of meal	2	11.1	8	40.0	10	25.6
↑Special type of food	17	88.9	12	60.0	29	74.4
Total	19	100.0	20	100.0	39	100.0
	$X^2 = 3.02$		P> 0.05			
Desire to lose weight						
Not agree	57	51.5	46	52.1	103	51.5
Agree	54	48.5	43	47.9	97	48.5
Total	111	100.0	89	100.0	200	100.0
	$X^2 = 0.009$		P > 0.05			
Method of weight loss						
↓No of meal	22	40.7	15	34.9	37	38.1
↓Special type of food	25	46.3	23	53.5	48	49.5
Two methods	7	13.0	5	11.6	12	12.4
Total	54	100.0	43	100.0	97	100.0
	$X^2 = 0.21$		P > 0.05			

↑--- increase

↓ --- decrease

The table showed that more than half (53%) of all students had unchanged appetite with exam stress, more than half (56.8%) in urban areas and less than half (48.3%) in rural areas. While 9% increasing appetite and more than one third (38%) had decreased appetite. The majority (80.5%) of all students had not desire to weight gain, more than one fourth (25.6%) of them increased number of meals while more than half (74.4%) increased special types of foods. less than half (48.5%) of all students had desire to weight loss, more than one thrid (38.1%) decreased number of meals , less than half (49.5%) decreased special types of foods and (12.4%) decreased two methods.

This differences were not proved statistically significance ($P > 0.05$).

Table (17):- Distribution of students according to their behavior to diet during exam stress, weight gain, method of weight gain , weight loss, and methods of weight loss in relation to sex.

Sex / Diet behavior	Male (99) No	%	Female (101) No	%	Total (200) No	%
Exam stress						
Unchanged appetite	67	67.7	39	38.41	106	53.0
↑Appetite to eat	8	8.0	10	9.98	18	9.0
↓Appetite to eat	24	24.3	52	51.61	76	38.0
Total	99	100.0	101	100.0	200	100.0
	X^2=17.9		P<0.001			
Desire to gain weight						
Not Agree	77	77.8	84	83.2	161	80.5
Agree	22	22.2	17	16.8	39	19.5
Total	99	100.0	101	100.0	200	100.0
	X^2=0.17		P>0.05			
Methods of weight gain						
↑ No of meal	6	27.3	4	23.5	10	25.6
↑Special type of food	16	72.7	13	76.5	29	74.4
Total	22	100.0	19	100.0	41	100.0
	X^2=0.10		P>0.05			
Desire to lose weight						
Not agree	63	63.6	40	39.6	103	51.5
Agree	36	36.4	61	60.4	97	48.5
Total	99	100.0	101	100.0	200	100.0
	X^2=0.20		P>0.05			
Method of weight loss						
↓No of meal	11	30.6	26	42.6	37	38.1
↓Special type of food	20	55.6	28	45.9	48	49.5
Two methods	5	13.8	7	11.5	12	12.4
Total	36	100.0	61	100.0	97	100 .0
	X^2=0.37		P>0.05			

↑--- increase

↓ --- decrease

The table showed that the more than half (53%) of all students had unchanged appetite with exam stress. More than two third (67.7%) of males and more than one third (37.41%) of females, while more than one third (38%) of the students had decreased appetite but 9% of them increased appetite.

The table showed also less than one fifth (19.5%) of the students had desired to weight gain, more than one fourth (25.6%) increased number of meals and less than three fourth (74.4%) increased special types of food. Less than half (48.5%) of the students had desire to weight loss. More than one third (38.1 %) decreased number of meals, less than half (49.5%) decreased special types of foods and less than one fifth (12.4 %) decreased two methods.

The differences were statistically significance for males and females in exam stress ($P < 0.05$).

Figure (XII) : Multiple bar chart showing effect of examination stress on students classified by sex

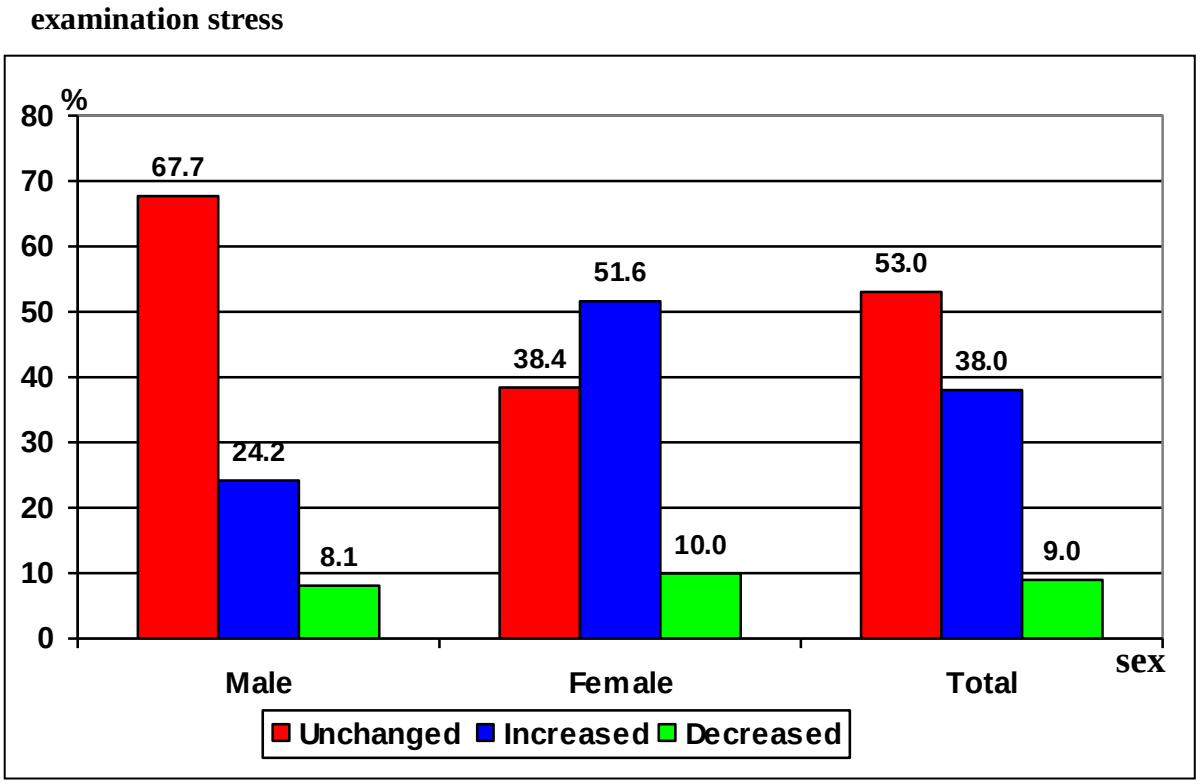
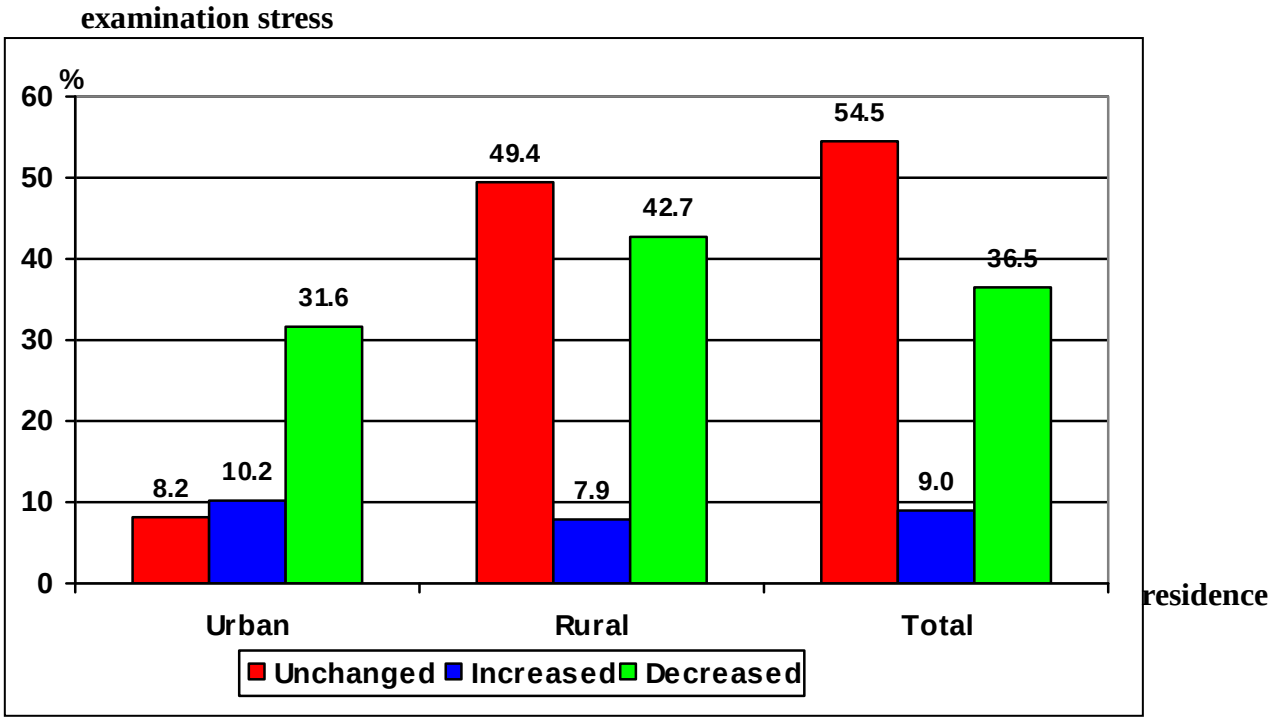


Figure (XIII) : Multiple bar chart showing effect of examination stress on students classified by residence



Part VI: Correlation of total knowledge of students

Table (18): Comparison of student's knowledge according to residence.

Residence / Total knowledge	Urban (111) Mean	±S.D	Rural (89) Mean	±S.D	t	P
Knowledge about nutrition						
Score about nutritional content	4.89	±2.0	5.27	±1.7	1.38	>0.05
Score about vitamins	17.80	±6.9	16.4	±8.9	1.17	>0.05
score about proteins	5.77	±1.8	6.29	±2.0	1.8	>0.05
score about starch and sager	7.10	±1.6	7.34	±1.6	1.05	>0.05
score about fats	1.87	±0.3	1.91	±0.2	0.71	>0.05
score about minerals	18.61	±5.4	17.4	±5.5	1.45	>0.05
Knowledge about nutrition for health status						
score about vision health	2.50	±0.89	2.5	±1.1	0.007	>0.05
score about teething health	2.88	±0.8	2.7	± 0.7	0.83	>0.05
score about diet prevent anemia	2.37	±0.9	2.3	±0.94	0.34	>0.05
score about mental health	2.58	±0.93	2.56	±0.91	0.12	>0.05
Knowledge about poor nutrition						
score about poor nutrition	2.57	±2.85	2.57	±2.87	0.08	>0.05

All differences were not statistically significant, there were minimal differences between means of urban and rural.

These differences were not proved to be statistically significant (P> .05).

Table (19):Comparison of students knowledge according to sex.

Sex / Total knowledge	Male(99) Mean	±S.D	Female (101) Mean	±S.D	t	P
Knowledge about nutrition						
score about nutritional content	5.6	±1.3	4.5	±2.1	4.6	<0.001
score about vitamins	15.2	±9.6	18.8	±5.7	3.2	<0.001
score about proteins	6.3	±2.0	5.7	±1.8	2.23	<0.05
score about starch and sager	7.3	±1.5	7.1	±1.6	0.91	>0.05
score about fats	1.8	±.3	1.9	±0.3	2.36	<0.05
score about minerals	17.2	±6.2	18.7	±4.5	1.9	>0.05
Knowledge about nutrition for health status						
score about vision health	2.4	±1.1	2.5	±0.8	0.8	>0.05
score about teething health	2.8	±0 .7	2.8	±0.8	0.0	>0.05
score about diet prevent anemia	2.6	±0 .8	2.6	±0.9	0	>0.50
score about mental health	2.4	±0 .9	2.6	±0 .9	1.5	>0.05
Knowledge about poor nutrition						
score about poor nutrition	2.15	±2.83	2.99	±2.84	2.09	<0.05

The table showed that the male student equal in total knowledge about teething health and diet prevent anemia with Females students while the female students had the higher mean in total knowledge about vitamins, fats, minerals, vision health, mental health and poor nutrition but the males students had higher mean than female in total knowledge about nutritional content, proteinsand starch & sager.

The differences were statistical significant related to knowledge about nutrition, vitamins, proteins, anemia prevention, and poor nutrition ($P<0.05$).

And not significance in knowledge about minerals, starch & sugar, fats, diet for vision health, teething health and mental health ($P>0.05$).

Table (20): Effect of socioeconomic Index on sub total of knowledge

Secioeconomic index / Total knowledge	< 66 Mean	±S.D	> 66 Mean	±S.D	T	P
Knowledge about nutrition						
score about nutrition contents	4.8	± 2.1	5.3	± 1.8	1.6	>0.05
score about vitamins	15.7	± 8.3	17.9	± 7.9	1.7	>0.05
score about proteins	5.6	± 2.2	6.3	± 1.9	2.1	< 0.05
score about starch and sager	6.9	± 2.0	7.4	± 1.4	1.9	>0.05
score about fats	1.8	±0 .4	1.9	± 0 .3	1.8	>0.05
score about minerals	16.7	± 6.5	18.5	± 4.9	2.0	<0.05
Knowledge about nutrition for health status						
score about vision health	2.4	± 0.9	2.6	± 0.9	1.4	>0.05
score about teething health	2.8	± 0.7	2.9	± 0.8	0.9	>0.05
score about diet prevent anemia	2.2	± 0 .9	2.4	± 0.9	1.3	>0.05
score about mental health	2.5	± 0.9	2.7	± 0 .9	1.4	>0.05
Knowledge about poor nutrition						
score about poor nutrition	2.37	± 2.64	2.51	± 2.90	0.22	>0.05

The table showed that the students with a higher socioeconomic index (>66) showed higher means in all knowledge of subgroup students compared to those with index < 66. This differences were proved significant in total knowledge about protiens and minerals (P<0.05)

Table (21): Factor affecting hemoglobin in relation to food habit & socioeconomic data.

Comparison / Factors affecting hemoglobin	Mean Hb	Comp
Break fast		
Always	79.05	F = 2.3
Sometimes	76.92	P > 0.05
Never	76.49	
Tea consumption		
Always	76.22	F = .77
Some times	77.11	P > 0.05
Never	77.65	
Water in take during meal		
Always	78.57	F = 2.1
Some times	76.70	P > 0.05
Never	78.90	
Family income		
↓200	75.62	F = 1.24
200 – 400	78.57	P > 0.05
400 – 600	76.45	
↑600	77.36	
Percent of family in come spent on diet.		
↓50 %	76.87	F = .95
50%	76.92	P > 0.05
↑50%	78.66	
Family size.		
↓5	78.81	F = 2.6
5-7	77.66	P > 0.05
↑7	75.75	

The table showed that the highly percent of hemoglobin was in always take breakfast, never consumption of tea after meals and never drinking water during meals as (79.05, 77.65 and 78.90 respectively).

The table showed also lowest percent of hemoglobin was in family income ↓ 200 pound / month and in the percent of family income spent on diet ↓ 50% and also in the family size above seven persons.

The differences were not proved statistically significant (P>0.05).

The results showed that

- Minimal effect of residence on student's practice as shown in table (6, 9, 12, 18).
- Better effect of food attitude and practice on health status (hemoglobin) for the students as shown in table (14).
- Better food habits in females' students as shown in table (15) and food behavior in male students as shown in table (17).