

Social and Economic Status and its Relationship Dietary behavior of Female's Students from Al- Qunfuthah University College

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ABSTRACT

This study aimed to find out the relationship between social and economic factors and dietary behavior among female students of Al-Qunfuthah University College - Umm Al-Qura University - Saudi Arabia. The researcher used the descriptive approach, and the study population consisted of female students at the University College in Al-Qunfuthah - Umm Al-Qura University - Saudi Arabia, and they numbered 1050 students. The sample was selected in a simple random way from the students at the University College in Al-Qunfuthah (literary section), and the sample size was 107 students, of whom 40 are from small families from 1 to 4, while there are 47 members of families of more than 7. The data was collected through the questionnaire electronic measure of socio-economic status and nutritional behavior, where social and economic factors were measured through the number of individuals in the family, income, place of residence, and type of housing, in addition to the social status of the students of Al-Qunfuthah University College - Umm Al-Qura University, nutritional behavior was determined through the extent of commitment to eating breakfast, and the number of main meals. The data were analyzed by chi-square test Constable. The results showed the chi-squared value of the social and economic factors and their relationship to dietary behavior which relates to adherence to breakfast, and to main mealtimes, the number of main meals in addition to the number of snacks, about dietary behavior, and family size, where the results extend from 21.34 to 3.721 is statistically significant at the significance level of 0.001, in favor of dietary behavior according to the variable number of snacks. About food behavior and place of residence, the results extend from 0.01 to 0.389 AH, which are not statistically significant in favor of the place of residence. The results also showed dietary behavior and type of housing, which range from 0.493 to 3.454, and are not statistically significant in favor of the type of housing. As for the results regarding dietary behavior and the work of the head of the household, which ranged from 1.638 to 10.035, it is not statistically significant in favor of the work of the head of the family. It also showed the results of food behavior and marriage, which extend from 1.141 is not statistically significant in favor of marriage according to the variable number of basic meals. At the end of the study, the researcher recommends the importance of the social and economic situation and its relationship to dietary behavior and the need to intensify food awareness and spread food culture to university students, especially non-scientific departments, and to all members of society.

Keywords: social and economic status, dietary behavior, females' students at the University College, Al-Qunfuthah, Saudi Arabia.

Introduction:

Awareness of the individual's lifestyle has beneficial effects on health, as the daily lifestyle changes from a good diet, daily movement, and activity to lack of movement and poor nutritional intake, as healthy lifestyle behaviors do not only aim to prevent a person from illness or disease, but also aim to Improving the general health of the individual (1). Psychological, physiological, economic, cultural, and social factors may affect the formation of dietary behavior leading to building unhealthy dietary behavior, such as skipping breakfast, eating fast food and snacks (2). Socio-economic status has direct effects on nutritional behaviors such as unhealthy snacks, not eating breakfast, fast food, consuming sugar-sweetened drinks and not eating fruits and vegetables among young people, (3). There is a close link in adults between nutritional knowledge and dietary behavior (4), food habits differ from country to country and from region to region of the same country, as they affect the nutritional and health status of family members, and this is subject to several considerations such as geographical aspects and the availability of foods in the region (5). The quality and length of life is determined by several factors, the most important of which are environmental factors, such as healthy eating behaviors, and one of the most important dietary orientations of the individual is to provide the body with appropriate quantities of fruits, vegetables, meat, dairy and dairy products, grains and their derivatives, and vegetable fats (6). One of the basic requirements for the promotion and protection of health is food and nutrition, which works to achieve development, human growth, and quality of life (7).

Evaluation of nutritional status and daily food intake is very important for students to know and identify poor nutritional behavior and practices. Which leads to improving their nutritional status by recommending healthy eating behavior (8). Breakfast is the most important meal of the day because it plays a major role in the quality of the diet in general and in meeting the overall daily nutrient goals. It works to overcome cardiac risk factors, weight control, cognitive performance, and metabolism (9) . Among the benefits of eating breakfast is the intake of micronutrients, decrease in body mass index, and improvement in the academic and cognitive function of students in addition to social, psychological, and behavioral benefits (10), that eating breakfast regularly has a positive effect on the health of adults and adolescents, and that skipping breakfast is associated with weight gain (11),The study adequacy of dietary intake is significantly associated with regular consumption of breakfast among children and adolescents (3) ,also that a breakfast rich in protein prevents the body from gaining fat compared to skipping breakfast (12), Breakfast has been recognized in Mediterranean countries as one of the most important daily meals. It has special benefits if consumed regularly for breakfast in children and adolescents. It stimulates the body to make changes in metabolism, make better food choices and improve the quality of the diet. It leads to the improvement of healthy habits throughout life, (13). Skipping breakfast is especially common among older children, adolescents, and females, because eating breakfast is associated with good nutrition, better academic

performance, and a lower risk of obesity (14), and that skipping breakfast and eating snacks has an impact on academic performance among adolescents (15), and that the consumption of breakfast is positively affected by family factors such as the type of family, the education of the mother and father, the occupation of the mother and father and the monthly income of the family (16).

Many studies have mentioned that meals offered in restaurants or shops are far from being healthy or balanced, and that frequent eating is linked to weight gain, and that ready meals are usually high in fat, sugar, salt, and small quantities of vegetables and fruits, and that young people are older. Consumers of fast food, which led to an increased risk of diabetes and weight gain (18).

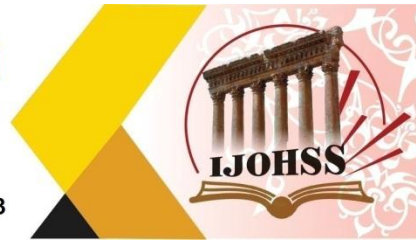
Fast food in restaurants is of higher quality than foods prepared at home compared to higher nutrition in foods prepared at home, as this was encouraged by competition in fast food restaurants, (19). Recently, the Western diet and snacks have prevailed more than the traditional diet, (20), and that the individuals most affected by the Western system are the urban population, and the upper social classes (21), and that the prevalence of snacks today contributes to nearly a third of the daily energy intake, because most snacks contain energy and lack essential nutrients, which have been associated with the risk of vascular disease, heart disease and obesity, as eating these snacks is affected by social and environmental habits. On both the individual and social levels (22). Frequent eating of salty snacks in the restaurant is considered one of the main causes of obesity (23). The risk of weight gain was directly related to skipping breakfast, fast food and eating restaurant food, (24). Diet quality may be affected by meal patterns, which helps explain the important relationships between diet and disease (25). Consumption of snacks outside the home has a negative impact on diet quality and contribution to total energy expenditure, as snacks are high in sugars and carbohydrates but lower in protein and fat than main meals, they contribute valuable components such as micronutrients and fruits to the diet (26).

Therefore, the aim of this study was to know the impact of social and economic factors on the dietary behavior of a samples of female students.

Methods:

Study design:

The study was conducted on females' students of Al-Qunfuthah University College (Literary Department) - Umm Al-Qura University - Kingdom of Saudi Arabia. Data was collected through a questionnaire, and the descriptive approach was used, especially the community survey studies method, and it was in the period from April to June 30, 2021. The questionnaire was designed, then arbitrated by specialists, and applied electronically, after approval by the competent authorities. The questionnaire was divided into two axes, the first axis includes social and demographic characteristics (age in years, place and type of residence, number of family members, and work of the head of the household and monthly income). As for



the second axis, it includes the nutritional axis (eating breakfast, the number and times of main meals, the number, and times of snacks).

Sample volume:

The sample was selected randomly for 107 participating students, out of a total number of (1050 female students), through the following equation:

$$n = \frac{z^2 P(1-P)}{d^2} \quad (27)$$

Table No. (1) shows the social and demographic characteristics of female students.

Table (1): Socio-demographic characteristics of Participants (n=107)

Home	Frequency	Percent%	Type home	Frequency	Percent%
Town	22	20.6	Private	95	88.8
Village	85	79.4	Return	12	11.2
Total	107	100.0	Total	107	100.0
number of family	Frequency	Percent%	Occupation	Frequency	Percent%
1-2	19	17.8	Teacher	19	17.8
3-4	19	17.8	Officer	19	17.8
5-6	1	.9	Merchant r	1	.9
7-8	32	29.9	Military	32	29.9
9--	37	34.5	without job	37	34.5
Total	107	100.0	Total	107	100.0
Mirage	Frequency	Percent%	Income	Frequency	Percent%
Yes	45	42.1	Very low	20	18.69
No	62	57.9	Low	23	21.49
Total	107	100.0	Moderate	16	14.95
-	-	-	High	48	44.85
-	-	-	Total	107	100.0

Table No. (1) shows the distribution of the sample according to their residential areas. It was (79.4%) of the rural population, (20.6%) of the urban

population, and most of the participants (88.8%) owned housing, and (12.2%) rented. The number of family members was higher than 9 and the percentage was (34.5%). Regards marriage, the highest percentage of unmarried participants was (57.9%), and the married women were (42.1%). As for the type of work for the head of the family, a high percentage of the participants were without work (34.5%) and they were (29.9%) in the army, was an equal proportion of employees and teachers (17.8%). Table (1) also reflects the general social and economic status of the participants, as more than two-thirds of the participants had high incomes (44.85%), followed by those with low and very low incomes (21.49%) and (18.69%), respectively.

Data analysis and presentation:

Data were analyzed using the Constable chi-squared test, using the Statistical Package for Social Sciences (28). Tables and graphical presentations of the results were provided by Excel Microsoft Office Software.

Results:

This study aims to find out the impact of social and economic factors on the nutritional behavior of female students of Al-Qunfuthah University College - Umm Al-Qura University, according to the variables of family size, eating breakfast, number of main meals, and eating main and light meals. Then the data was analyzed using the constable chi-square test and the results will be explained according to the order of the questions.

Question result (1):

The first question states, "Is there a relationship between family size and dietary behavior?" To verify the validity of the hypothesis, the researcher used the chi-square $n*n$ test, constable, between family size and food behavior about eating breakfast, the number of main meals eaten by the individual, and adherence to the time of main meals, in addition to fast food. The analysis showed the following results,

Table (2) Chi square value for good agreement between family size and adherence to breakfast (n=107)

Variable		Family size					Total	Chi Value	Df	Sig	Result
		1-2	3-4	5-6	7-8	9--					
Do you eat breakfast	Yes	13	11	19	19	10	72	21.340	4	0.001	There are differences
	No	1	15	1	8	10	35				
The number of main meals eaten per day	One	0	0	2	5	2	9	16.261	8	0.039	There are differences
	Two	8	22	14	11	14	69				
	Three	6	4	4	11	4	29				

The main mealtimes of the day	Constant	0	4	2	6	5	17	5.222	4	0.265	There aren't differences
	Variable	14	22	18	21	15	90				
The number of the snacks consumed per day	One	8	13	11	15	9	56	3.721	8	0.881	There aren't differences
	Two	6	9	7	8	7	37				
	Three	0	4	2	4	4	14				
Total		14	26	20	27	20	107				

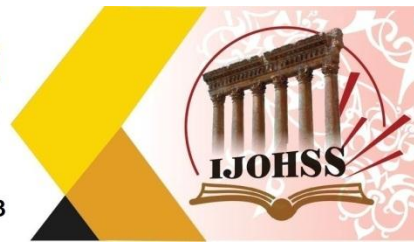
Table No. (2) shows that the chi-squared value to know the effect of the number of family members on eating breakfast, the number of main meals that an individual eats per day, and adherence to the time of main meals, in addition to the number of fast food eaten are 21.34, 16.26, 5.222, and 3.721 on respectively, and all of them are statistically significant at the level of significance 0.001, which indicates that there is an effect on changing dietary behavior, through adherence to breakfast, the number of main meals, adherence to the main meal times, and the variable of the number of family members, except for the number of snacks.

Result of question (2):

The second question states, "Is there a relationship between place of residence and nutritional behavior?" To verify the validity of the hypothesis, the researcher used the chi-square $n * n$ test, constable, between the place of residence (urban / villages) and food behavior about eating breakfast, the number of main meals that the individual eats, and adherence to the time of the main meals, in addition to the number of meals the rapid analysis showed the following results,

Table No. (3) chi-square value for good agreement between place of residence (urban/rural) and dietary behavior (n=107)

Variable	Home		Total	Value	Df	Sig.	Result	
	Town	Village						
Do you eat breakfast	Yes	15	57	0.010	01	0.920	No	
	No	7	28					35
The number of main meals eaten per day	One	02	07	0.019	02	0.991	No	
	Two	14	55					69
	Three	06	23					29
The main mealtimes of the day	Constant	03	14	0.105	01	0.746		
	Variable	19	71					90
The number of snake meals eaten per day	One	12	44	0.389	02	0.823		
	Two	8	29					37



	Three	2	12	14				
Total		22	85	107				

Table No. (3) shows that the chi-squared value to know the effect of the place of residence and dietary behavior about eating breakfast, the number of main meals that individual eats, and commitment to the time of main meals, in addition to fast food, is 0.01, 0.019, 0.105, and 0.389, respectively. All of them are not statistically significant, which indicates that the place of residence (urban / rural) is not associated with dietary behavior through commitment to breakfast, the number of main meals, commitment to meals, in addition to the number of snacks.

Result of question (3):

The third question states, "Is there a relationship between housing type and dietary behavior?" To verify the validity of the hypothesis, the researcher used the chi-square $n * n$ test, constable, between the level of the type of housing (ownership / rent) and food behavior about eating breakfast, the number of main meals that the individual eats, and adherence to the time of the main meals, in addition to the number of Takeaways The analysis showed the following results,

Table No. (4) Chi-square value for good match between housing type and food behavior(n=107)

Variable	Home type		Total	Value	Df	Sig.	Result	
	Own	No						
Do you eat breakfast	Yes	65	07	72	0.493	01	0.483	No
	No	30	08	38				
The number of main meals eaten per day	One	08	01	09	0.032	02	0.984	No
	Two	61	08	69				
	Three	26	03	29				
The main mealtimes of the day	Constant	17	00	17	2.553	01	0.110	No
	Variable	78	12	90				
The number of snake meals eaten per day	One	47	9	56	3.454	02	0.178	No
	Two	34	3	37				
	Three	14	0	14				
Total		95	12	107				

Table No. (4) shows that the chi-squared value to know the impact of the type of housing (ownership/rent) and dietary behavior with regard to eating breakfast, the number of main meals eaten by the individual, and commitment to the time of main meals, in addition to fast food, are 0.493, 0.032, 2.553, and 3.454 respectively, all of which are not statistically significant, which indicates that the type of housing



(ownership/rent) is not associated with dietary behavior through adherence to breakfast, the number of main meals, adherence to meals, in addition to the number of snacks.

Result of question (4):

The fourth question states, "Is there a relationship between the type of work of the head of the household and nutritional behavior?" To verify the validity of the hypothesis, the researcher used the chi-square $n * n$ test, constable, between the type of work of the head of the household and the dietary behavior about eating breakfast, the number of main meals that the individual eats, and adherence to the time of the main meals, in addition to the number of fast meals. The following results,

Table No. (5) Chi-square value for good matching between work type and food behavior(n=107)

Variable		Type of job					Total	Value	Df	Sig.	
		1.00	2.00	3.00	5.00	7.00					
Do you eat breakfast	Yes	11	14	1	22	24	72	1.638	4	.802	No
	No	8	5	0	10	12	35				
The number of main meals eaten per day	One	2	0	0	1	6	9	7.792	8	.454	No
	Two	13	12	1	21	22	69				
	Three	4	7	0	10	8	29				
The main mealtimes of the day	Constant	3	3	0	7	4	17	1.662	4	.798	No
	Variable	16	16	1	25	32	90				
The number of snake meals eaten per day	One	8	13	1	15	19	56	10.035	08	0.263	No
	Two	8	5	0	9	15	37				
	Three	3	1	0	8	2	14				
Total		19	19	1	32	36	107				

Table No. (5) shows that the value of chi-squared to find out the effect of the type of work of the head of the household on eating breakfast, the number of main meals that the individual eats, and adherence to the time of the main meals, in addition to fast food, are 1.638, 7.792, 1.662, 10.035, respectively, all of which are invalid. Statistically significant, which indicates that each of the type of work of the head of the household is not associated with dietary behavior through commitment to breakfast, the number of main meals, commitment to meals, in addition to the number of snacks.

Result of question (5):

The first question states, "Is there a relationship between marriage and dietary behavior?" To verify the validity of the hypothesis, the researcher used the chi-square $n * n$ test, constable, between the social status and food behavior about

eating breakfast, the number of main meals that the individual eats, and commitment to the time of the main meals, in addition to fast food. The analysis showed the following results,

Table No. (6) Chi-square value for good match between marriage and dietary behavior(n=107)

		Marriage		Total	Value	Df	Sig.	Result
		Yes	No					
Do you eat breakfast	Yes	28	44	72	0.906	01	.341	No
	No	17	18	35				
The number of main meals eaten per day	One	0	9	9	6.342	02	0.009	Yes
	Two	35	34	69				
	Three	10	19	29				
The main mealtimes of the day	Constant	6	11	17	0.379	01	.538	No
	Variable	39	51	90				
The number of snake meals eaten per day	One	21	35	56	1.141	02	0.565	No
	Two	18	19	37				
	Three	6	8	14				
Total		45	62	107				

Table No. (6) showed that the chi-square value to know the social status on dietary behavior with regard to eating breakfast, the number of main meals that an individual eats, and adherence to the time of main meals, in addition to fast food, are 0.906, 6.342, 0.379, and 1.141, respectively, and all of them are It is statistically insignificant, except for the number of basic meals, which indicates that married couples commit to eating a number of the main food meal per day., which indicates that each of the income is not associated with dietary behavior through commitment to breakfast, commitment to meals, in addition to the number of snacks .

This indicates that income is not related to dietary behavior through commitment to breakfast, commitment to meals, in addition to the number of snacks.

Result of question (6):

The sixth question states, "Is there a relationship between income and dietary behavior?" To verify the validity of the hypothesis, the researcher used the chi-square n*n test, constable, between the level of income and dietary behavior about eating breakfast, the number of main meals eaten by the individual, and adherence to the

time of main meals, in addition to the number of fast meals. The analysis showed the following results,

Table No. (7) chi-squared value for good matching between income and dietary behavior(n=107)

		Income			Total	Value	Df	Sig.	Result
		Low	Middle	High					
Do you eat breakfast	Yes	31	11	30	72	0.967	02	0.617	No
	No	12	5	18	35				
The number of main meals eaten per day	One	5	1	3	9	1.593	04	0.810	No
	Two	25	11	33	69				
	Three	13	4	12	29				
The main mealtimes of the day	Constant	05	04	08	17	1.600	02	0.449	No
	Variable	38	12	40	90				
The number of snake meals eaten per day	One	25	8	23	56	2.942	04	0.568	No
	Two	15	6	16	37				
	Three	3	2	9	14				
Total		43	16	48	107				

Table No. (7) shows that the value of chi-squared to know the impact of income on eating breakfast, the number of main meals that an individual eats, and commitment to the time of main meals, in addition to fast food, are 0.967, 1.593, 1.600, and 2.942, respectively, all of which are not statistically significant. , which indicates that income is not related to dietary behavior through commitment to breakfast, number of main meals, adherence to main meals, in addition to the number of snacks.

Discussion:

This study represents the detection of dietary behavior and its relationship to the social and economic status of a group of female students, which aims to know the impact of social and economic factors on dietary behavior, by identifying information on social and demographic characteristics (housing in urban or rural areas, housing: ownership or rent, size family, the work of the head of the household, marriage, and the level of household income). The result of the answer to the first question, which states that there are statistically significant differences to know the effect of family size on dietary behavior (eating breakfast, number of main meals, adherence to the

time of main meals and number of fast meals) t is 21.34, 16.26, 5.222, 3.721, respectively, and it is statistically significant at the significance level of 0.001, which indicates that the size of the family has a relationship with dietary behavior, from, through commitment to breakfast, the number of main meals, adherence to the dates of main meals, except for the number of snacks, this study agreed with a study (29). Which shows that family size influences dietary behavior. The study literature indicates that social factors have a direct impact on dietary behavior, such as skipping breakfast, eating fast food, and eating out (30). Also, this study agreed with the study (31), that some family factors (family type, education and occupation of the mother and father) have a positive effect on breakfast consumption. This study also agreed with the study (20), which shows that economic and social factors were directly related to skipping breakfast among adolescents and students, and it is considered an unhealthy dietary behavior.

The answers of the second question, which states that there are statistically significant differences to know the impact of the place of residence on dietary behavior (eating breakfast, number of main meals, adherence to the time of main meals and fast food) is 0.01, 0.019, 0.105, and 0.389, respectively. It is not statistically significant, which indicates that the place of residence (urban/ rural) has no relationship with dietary behavior through commitment to breakfast, number of main meals, commitment to meals, in addition to number of snacks, this study agreed with a study (32). The study authors mentioned that recently the Western diet and snacks prevailed more than the traditional diet (20), and that the individuals most affected by the Western system are the urban population and the upper social classes (21), and that food habits differ from one country to another and from one region to another and are subject to geographic aspects (5).

The answers of the third question, which states that there are statistically significant differences to know the impact of the type of housing (ownership / rent) on dietary behavior (eating breakfast, number of main meals, adherence to the time of main meals and fast food) is 0.493, 0.032, 2.553, and 3.454 in a row, all of which are not statistically significant, which indicates that the type of housing (ownership/rent) is not associated with dietary behavior through adherence to breakfast, number of main meals, adherence to meals, in addition to the number of snacks. This study agreed with a study (5), Which shows the absence of a correlation between the degree of food behavior and the social and economic variables such as the type of housing (ownership / rent) and income, as the study literature indicates that economic, social, cultural and physiological factors may affect the formation of food behavior and eating habits, which lead to build dietary behavior and unhealthy eating habits, such as skipping breakfast, snacks, eating fast food and eating outside the home(2).

The answers of the fourth question, which states that there are statistically significant differences to know the impact of the type of work of the head of the household on dietary behavior (eating breakfast, number of main meals, adherence to

the time of main meals and fast food) is, 1.638, 7.792, 1.662, 10.035, respectively, and all of them Not statistically significant, which indicates that each of the work of the head of the household is not associated with dietary behavior through adherence to breakfast, the number of main meals, adherence to meals, in addition to the number of snacks. This study agreed with the study (33), This study differed from the study (34). the quality of life of students is indirectly affected by the social and economic status of the family, and that among the factors that affect dietary habits are educational status, availability and cost of food, and per capita income. The study literature reported that unemployment and parental education level were not related to breakfast consumption of their children and adolescents (35).

The answers of the fifth question, which states that there are statistically significant differences to know the effect of marriage on dietary behavior (eating breakfast, number of main meals, adherence to the time of main meals and fast food) is 0.906, 6.342, 0.379, and 1.141, respectively, all of which are not statistically significant. , except for the number of basic meals, which indicates that married couples are committed to eating a number of the main food meal per day, which indicates that marriage is not related to nutritional behavior through commitment to breakfast, commitment to meals, in addition to the number of snacks. This study differed from the study (36), which shows that the behavior of the married population when eating is better while the unhealthy eating behavior appears in those who have siblings or offspring. This study also agreed with the study (37), Which shows that married couples commit to eating two or more meals a day, which indicates that they have healthy dietary behaviors. This study also differed from the study (38), which indicate that healthy eating behavior may positively affect married women. Also, this study differed from the study (39), which shows that healthy dietary behavior is positively affected by marital status (marriage) and that men are more affected than women by marital status and that reducing social isolation is very important to promote healthy dietary behaviors.

The result of answering the sixth question, which states that there are statistically significant differences to know the effect of income on dietary behavior (eating breakfast, number of main meals, adherence to the time of main meals and fast food) is they are 0.967, 1.593, 1.600, and 0.568 respectively, all of which are not statistically significant, which indicates that income is not associated with dietary behavior through adherence to breakfast, number of main meals, adherence to main meals, in addition to the number of snacks. This study differed with study (40), It was mentioned that individuals with high economic and social status consume more vegetables and fruits, while those with low economic and social status tend to consume more energy-rich foods such as ready meals rich in energy materials such as fried foods. Also, this study differed with a study (15) which stated that high-income people enjoyed a balanced diet, and increased breakfast intake. This study differs with

a study (32), which shows that low-income patients eat unhealthy food because of the high costs of healthy and varied food.

Conclusion:

This study presents data on knowing the relationship of social and economic factors with dietary behavior among a sample of female students at Al-Qunfuthah University College - Umm Al-Qura University - Saudi Arabia. Some results showed a difference between the positive and negative effects of social and economic factors on dietary behavior.

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