

Socio-Economic Factors and Nutritional Aspects of Qashqai Girls of Iran

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ABSTRACT

Many studies have been done on the qashqai of Iran by taking into account the cultural and socio-economic aspects. This is an attempt to study of qashqai with reference to their nutritional status on the basis of anthropometric measurements. The aim of this study is to assess the nutritional status of Qashqai girls of Iran and investigate their dietary customs. To assess the nutritional status quantitatively with the help of anthropometric measurements. A total of 371 girls belonging to age group 6 to 18 years were selected from 500 households of qashqai tribe. The anthropometric measurements show that height and weight values of the present study are lower than the NCHS standard. The dietary intake of the girls of the present study in terms of caloric consumption is lower than WHO standard. There is deficiency in diet of the girls both in quality and quantity as compared to the accepted standard. Qashqai girls have faced malnutrition. The analysis of the data reveals a significant association between economic condition and nutrient intake. Lower the social-economic condition, lower is the consumption of nutrient, therefore the main underlying cause of low caloric consumption is poverty.

Keyword:

Nutritional, Qashqai, height, weight, dietary survey, social-economic

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INTRODUCTION

The e-contracts don't have any difference from the Nutrition is of prime importance in the attainment of normal growth and development and in the maintenance of health throughout life. The concept of health, as defined by the World Health Organization is the "State of complete physical mental and social well-being and not merely an absence of disease or infirmity". (Harrison, 1986). The science of nutrition has been developed by using the combined knowledge of the physical and biological sciences. Its application involves the social sciences related to man's behavior i.e. psychology, sociology, anthropology, economics etc.(Damon, A. 1975).The anthropological concern to the study of nutrition has emerged as an important focus in anthropological research. Though anthropological approach is holistic, it gives emphasis on dietary survey which aims at collecting qualitative information on dietary patterns and food habits. This provides information on the kinds of foods consumed the frequency with which these foods appear in the diet, the source of supply, methods of storing, preparing and cooking. (Him worth, H.1968).It also takes' into account the density of population, extent of urban contacts, economic status, local religious customs and traditions relating, fasts, feast and taboos which contribute in nourishing the population.(Kings, A.2005).All these factors influence the diet, because it is awidely recognized fact that the diet of the people of a particular area is greatly influenced by local conditions of soil and climate. The result form such aspect has been increasing emphasis upon nutritional concern in explaining variability in human biology, behavior and culture. (Johnston, 1987).

Methodology

The Qashqai tribe has a population of about 144500 in Fars province, 72742 of them are men and 71758 are women. The age group selected for the study is 6 to 18 years of females.For the present study the following parameters have been used to assess the nutritional status of the subjects under study.

1. Direct parameters which include anthropometric measurements.
2. Indirect parameters are dietary survey, energy intake and the questionnaire method.
3. The demographic parameters viz.socio-economic factors, like occupation, income, education, etc. are incorporated in the indirect parameters.

Anthropometry is the scientific method and techniques of taking measurements. Of man .For the present study height, weight has been used to derive the nutritional status of Qashqaigirls of Iran. Informal interview/questionnaire method was employed to collect data on socio-economic, demographic information as well as on the general food pattern, frequency, and food preference and food taboo.Data processing and statistical analysis were performed by using SPSS11.5 comparison,and Excel program.

Results and Discussion

The measurements of body weight and height are often considered to be core skills of nutritionists and nutritionally oriented health workers. The Anthropometric measurements are taken on the people of Awraman village. This may be useful to understand the nutritional status of the community and identifies the people who are at risk.

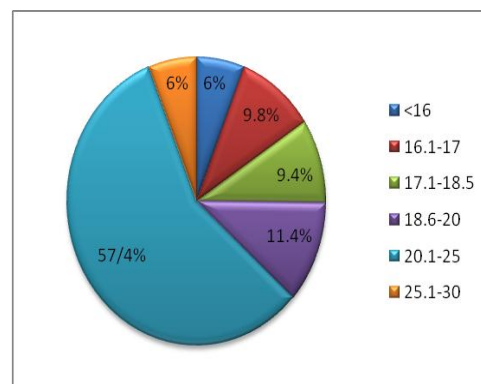


Figure 1:Graph showing B.M.I Classification of Qashqai Girls

Table 1: Mean Height in (cm) of the Qashqai Girls and Table 2: Mean Weight in (kg) of the Qashqai Girls and Comparison with NCHS standard (for 6-18 years) Comparison with NCHS standard (for 6-18 year)

Sr No	Age group in years	NCHS	Qashqai girls
1	6	119.0	116.8
2	7	124.4	121.5
3	8	129.6	127.0
4	9	134.8	131.9
5	10	140.3	136.9
6	11	146.4	143.4
7	12	153.0	146.9
8	13	159.9	150.1
9	14	166.2	159.5
10	15	171.5	163.0
11	16	175.2	167.2
12	17	176.2	169.4
13	18	176.8	169.8

Sr No	Age group in years	NCHS	Qashqai girls
1	6	21.7	19.8
2	7	24.0	21.2
3	8	26.7	25.3
4	9	29.7	28.2
5	10	33.3	32.3
6	11	37.5	34.6
7	12	42.3	36.1
8	13	47.8	41.4
9	14	53.8	47.8
10	15	59.5	53.6
11	16	64.4	58.2
12	17	66.3	60.4
13	18	68.8	62.3

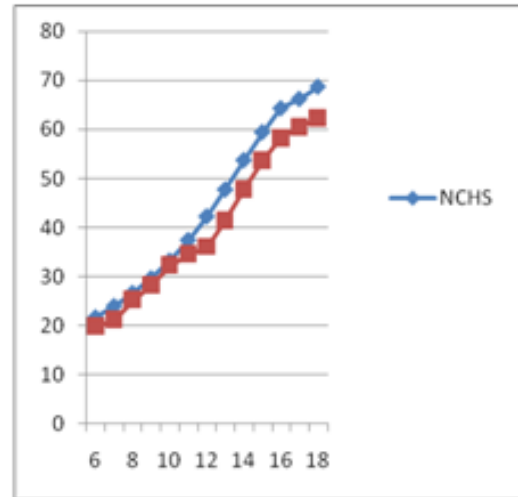
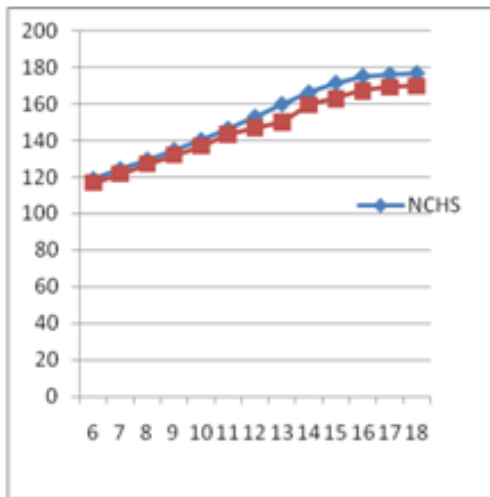


Figure 2: Graph showing Comparison of mean height in (cm) of Qashqai girls with NCHS standard (for 6-18 years) Figure 3: Graph showing Comparison of mean weight in (kg) of Qashqai girls with NCHS standard (for 6-18 years)

Table3: Statistical Constants for Body Height (Cm) of Qashqai girls

Sr No.	Age Group (in year)	No	Male
			Mean ± S.D.
1	6	18	116.8 ± 4.6
2	7	20	121.5 ± 1.9
3	8	22	127.0 ± 2.8
4	9	19	131.9 ± 2.1
5	10	32	136.9 ± 1.9
6	11	29	143.4 ± 4.6
7	12	27	146.9 ± 4.5
8	13	30	150.1 ± 2.9
9	14	33	159.5 ± 2.4
10	15	38	163.0 ± 3.3
11	16	35	167.2 ± 3.8
12	17	31	169.4 ± 2.3
13	18	37	169.8 ± 3.3

Table4: Statistical Constants for Body Weight (Kg) of Qashqai girls

Sr No.	Age Group (in year)	No	Male
			Mean ± S.D.
1	6	18	19.8 ± 1.7
2	7	20	21.2 ± 1.6
3	8	22	25.3 ± 1.8
4	9	19	28.2 ± 2.1
5	10	32	32.3 ± 2.9
6	11	29	34.6 ± 2.8
7	12	27	36.1 ± 2.4
8	13	30	41.4 ± 2.1
9	14	33	47.8 ± 4.3
10	15	38	53.6 ± 4.8
11	16	35	58.2 ± 3.0
12	17	31	60.4 ± 3.2
13	18	37	62.3 ± 2.9

The table1 presents the data of height of Qashqai girls of 6 to 18 years with NCHS standard. With comparison of Qashqai girls by NCHS standard concluded that there is a difference from - 2.2 Cm at 6 year, 2.9 Cm at 7 year, 2.6 Cm at 8 year, 2.9 Cm at 9 year, 3.4 Cm at 10 year, 3.0 Cm at 11 year, 6.1 Cm at 12 year, 9.8 Cm at 13 year, 6.7Cm at 14 year, 8.5 Cm at 15 year, 8.0 Cm at 16 year, 6.8 Cm at 17 year, and finally 7.0 Cm at 18 year. The highest difference in height was found out 9.8 cm at 13 years and the least difference in height was found to be at age 6 year with difference of 2.2 Cm. Anyway, the growth is different for various ages. The high rate of growth is in 18 years old and it is 176.8 Cm. Height is a measure of growth and long term poor and inadequate nutrition might be indicated by failure to increase in appropriate height, though it is predominantly controlled by heredity. In children and youths for age gives a picture of past nutritional history (Park and Park, 2002). Therefore the poor nutrition of the people of the present study could be one of the main reasons of their low height.

The table 2 presents the data of weight of Qashqai girls of 6 to 18 years with NCHS standards. By comparison of Qashqai girls with NCHS seems that the status of Qashqai girls is lower than the standard one. It is found that there is a difference of 1.9 Kg at 6 year, 2.8Kg at 7 year, 1.4 Kg at 8 year, 1.5 Kg at 9 year, 1.0 Kg at 10 year, 2.9Kg at 11 year, 6.2 Kg at 12 year, 6.4 Kg at 13 year, 6.0 Kg at 14 year, 5.9 Kg at 15 year, 6.2 Kg at 16 year, 5.9 Kg at 17 year and 6.5 Kg at 18 year. The highest difference in weight was found out to be at age 6.4 Kg at 13 years and the least difference in weight was found to be at age 10 years with difference of 1.0 Kg. Weight is most useful Anthropometric measurement which is related to the body mass index as its protein-calorie malnutrition is best indicated by weight deficiency in children and youths of all age groups. (Singh and Bhasin, 1989). Boys of low socio-economic group were lighter than commonly used data Weight is influenced by many factors like height of the individual, body frame, size, current caloric intake and other environmental factors. (Casper RC and Offer D, 1990). Hence, the above factors could be associated with the underweight condition of the Children

and youths boys of the present study. There is no doubt that satisfactory weight gain is a reasonable sign that the person is being fed adequately and is relatively free from serious infection. There is significant correlation 0.861 between height and weight at 1% level of significance.

As seen in the above table 3 it can be concluded that the S.D. values of body height for Qashqai girls shows that the dispersion is not limited meaning the group is heterogeneous and not homogeneous. This result may be clearer for the earlier age groups 6 years to 18 years. For the earlier ages the exogenous factors play a dominant role than the endogenous factors at relatively higher ages. This would be clear from S.D. values.

As seen in the table 4 it can be concluded that the S.D. values of body height for Qashqai shows that the dispersion is not limited meaning the group is homogeneous and not

heterogeneous. This result may be clearer for the later age groups 15 years to 18 years. For the earlier ages the exogenous factors play a dominant role than the endogenous factors at relatively higher ages. This would be clear from S.D. values.

When taken the BMI values of Qashqai girls we see that, for BMI class <16, 6.0% Qashqai girls showed CED III grade diagnosis. For BMI class 16.1-17, 9.8 % Qashqai girls showed CED II diagnosis. For BMI class 17.1-18.5, 9.4 % Qashqai girls showed CED I mild diagnosis. For BMI class 18.6 – 20, 11.4 % Qashqai girls showed low weight normal. For BMI class 20.1-25, 57.4 % Awraman boys showed normal diagnosis. For BMI class 25.1-30, 6.0 % Qashqai girls showed under obese grade I diagnosis. (Figure 3)

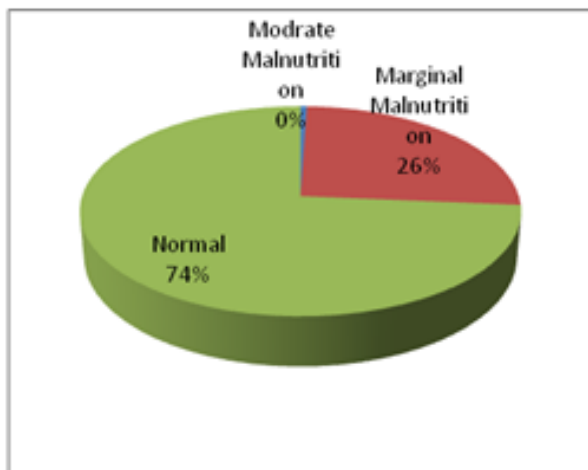


Figure 4: Height- for-Age of Qashqai girls

According to water lows classification of Height-for- age of Qashqai girls. From the graph 3 it is observed that 0% of Qashqai girls are Moderate Malnutrition, 26% are Marginal Malnutrition and 74% are normal. Whereas Gomez's classification weight-for- age of Qashqai girls. From the graph 4 it is observed that 4% of Qashqai girls are Grade II Malnutrition, 45% are Grade Malnutrition and 51% are normal. (Figure 4, 5)

Diet of the subjects

The staple food of the Qashqai tribe is rice, bread and milk. The dairy products like yogurt, curd, cheese and butter are available. The consumption of dairy products is more in summer than in other seasons. The women prepare various food items and especially ash as a dairy product. In winter they cook *Alook Ash* and *Tabeh Ash*. They eat mostly red meat, mutton and goat meat more than chicken and they rarely use beef. Consumption of fish and shrimp is less

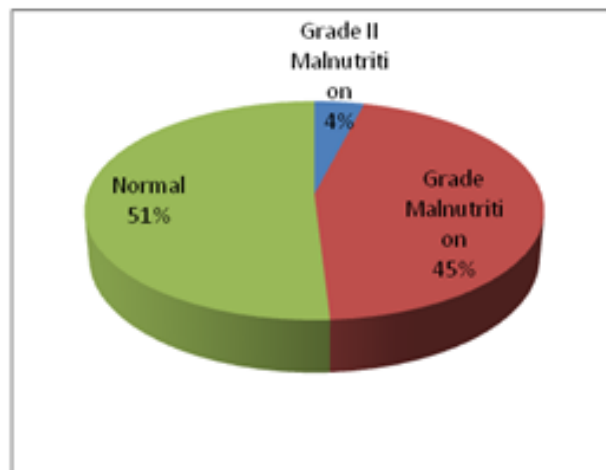


Figure 5: Weight- for-Age of Qashqai girls

among them. They eat egg for breakfast with bread and they drink tea. Tea is very frequent and common in winter. They use cereals and pulses like pea, lentil in their food. As the tribal people have no refrigerators, they have to use fresh meat and fresh vegetables. They use vegetables like radish, basil, onion, potato and tomato. They eat fruits like orange, apple, apricot, and peach. In spring and summer Qashqai girls and women collect vegetables from the farms and from forests and they dry it to use in other season. Since the Qashqai are migrant tribal group they are more dependent on such resources. In the past as there was enough rain, vegetation was also more so the animal wealth was good but now keeping and grazing more animals is very difficult hence their economy is affected. Generally, Qashqai people don't have various food items, and they use their own limited products. They have simple diet without any variety.

Table 5: The mean intake of Kcal / day of Qashqai girls and the energy requirements by (WHO) according to age groups

Age group in years	Mean intake of Qashqai girls (Kcal / day)	Energy requirement recommended by WHO (Kcal / day)	Deficit (Kcal / day)
6 – 10	1948	2100	-152
11 – 12	2106	2200	-94
13 – 14	2134	2400	-266
15 – 16	2429	2650	-221
17 – 18	2629	2850	-221

The comparison of received energy mean of the staple food of the Qashqai tribe is rice, bread and milk. The dairy products like yogurt, curd, cheese and butter are available. The consumption of dairy products is more in summer than in other seasons. The women prepare various food items and especially ash as a dairy product. In winter they cook *Alook Ash* and *Tabeh Ash*. They eat mostly red meat, mutton and goat meat more than chicken and they rarely use beef. Consumption of fish and shrimp is less among them. They eat egg for breakfast with bread and they drink tea. Tea is very frequent and common in winter. They use cereals and pulses like pea, lentil in their food. As the tribal people have no refrigerators, they have to use fresh meat and fresh vegetables. They use vegetables like radish, basil, onion, potato and tomato. They eat fruits like orange, apple, apricot, and peach. In spring and summer Qashqai girls and women collect vegetables from the farms and from forests and they dry it to use in other season. Since the Qashqais are migrant tribal group they are more dependent on such resources. In the past as there was enough rain, vegetation was also more so the animal wealth was good but now keeping and grazing more animals is very difficult hence their economy is affected. Generally, Qashqai people don't have various food items, and they use their own limited

products. They have simple diet without any variety. And standard received energy (WHO) has been shown in Table 5. As it is obvious the mean of received energy is 1948Kcal/d for Qashqai girls of 6-10 ages and the standard recommended rate (WHO) is 2100Kcal/d. Therefore 152Kcal/d is lower than (WHO) rate. In 11-12 ages this mean is 2106Kcal/d and the recommended rate is 2200Kcal/d and it is 94 less than the recommended rate. In 13-14 ages this mean is 2134Kcal/d and the recommended rate is 2400Kcal/d and it is 266 less than the recommended rate. In 15-16 ages this mean is 2429Kcal/d and the recommended rate is 2650Kcal/d and it is 221 less than the recommended rate. In 17-18 ages this mean is 2629Kcal/d and the recommended rate is 2850Kcal/d and it is 221 less than the recommended rate.

Economic and social factors

The Qashqai people are nomads and their economy mainly depends on animal husbandry and animal products. Agriculture has a secondary role among them. Livestock is the main capital of them and every family keeps it. Making of handcrafts is another important occupation of families, especially for girls and women along with farming and animal husbandry.

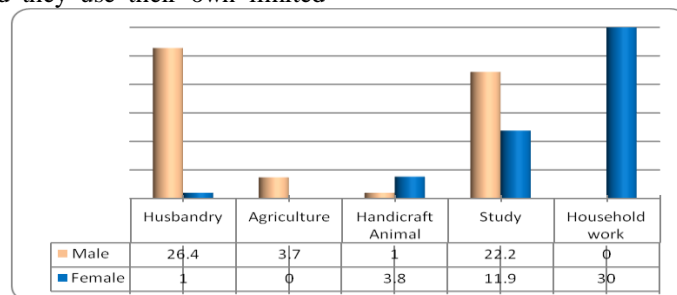


Figure No. 6 Graph showing occupation status of the Ghashghae tribe

Graph 6 shows the occupational status of Qashqai, 27.4% (26.4% men and 1.0% women) people are engaged in animal husbandry and 3.7% (3.7% men and 0% women) of them are busy in agricultural sector and 4.8% (3.8% women and 1.0% men) people's occupation is carpeting and

handcrafting, 34.1% (22.2% boys and 11.9% girls) are students category and 30.0% (0% men and 30.0% women) are engaged in household activities. Sale and exchange of the carpet is mostly done by men.

Table 6: The monthly income of the Qashqai tribe of 500 households

Sr No	Monthly income (RS)	Class	Frequency	Percentage
1	< 200/000	Lower class	114	22.8
2	201/000-300/000	Lower middle class	161	32.2
3	301/000-400/000	Middle class	103	20.6
4	401/000-500/000	Higher middle class	68	13.6
5	500/000 >	Higher class	54	10.8

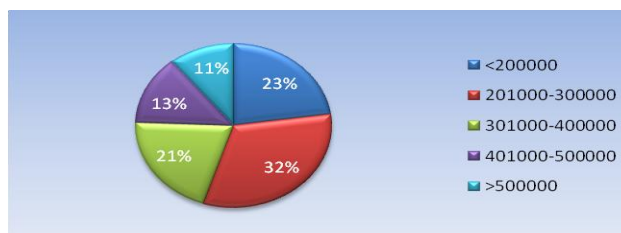


Figure 8: Graph showing income status of Qashqai tribe

Table 6 shows the income rate of Qashqai families. For better understanding we have divided families into five groups: lower class, lower middle class, middle class, higher middle class and higher class with income 200 up to 500 USD. As it is obvious, most of the families are lower

middle class and among 500 families 114 families (22.8%) are lower class, 161 (32.2%) lower middle class, 103 (20.6%) middle class, 68 (13.6%) higher middle class and 54 (10.8%) higher class. Topographical situation of the area is one of the reasons of low income among the tribe.

Education among the Qashqai people

Graph 9 Shows that 6.1% of Qashqai tribe are irritated, 29.6% is in primary school, 23.1% in guidance school, 26.6% in high school and pre-university, 5.3% in associate degree, 7.4% in bachelor degree and 1.9% in

master and Ph.D. degrees. It should be mentioned that primary, guidance and high schools are available in the village and for higher levels they have to go to the nearby cities. (Figure 9).

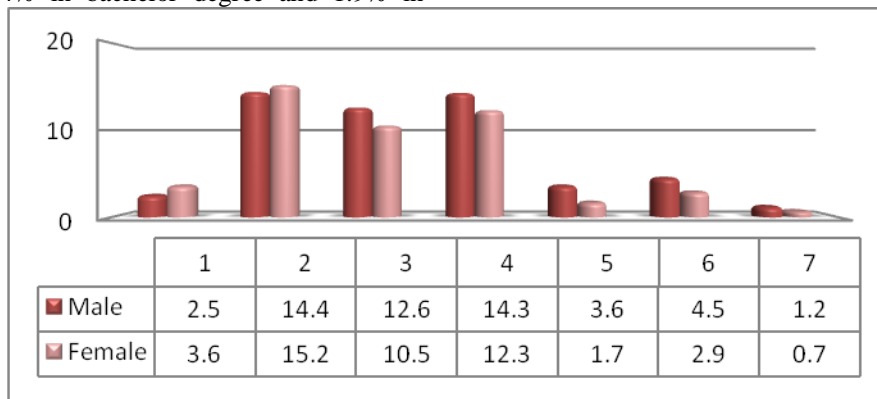


Figure 9: Graph showing education status of Qashqai people

Conclusion

Malnutrition is a worldwide problem. Developing countries like Iran have a high prevalence of under nutrition and ill health. Malnutrition has emerged as a major health problem of many tribal groups. Out-comings and interpretations of all parameters show that Anthropometric findings and BMI classification show that 6.0% of Qashqai people are in III CED grade, 9.8% in II CED grade, 9.4% in middle CED grade, 11.4% in Low Weight Normal, 57.4% in normal, 6.0% in I obese grade. Among the girls of Qashqai height shows a gradual growth from 6 up to 18 years old. Anyway, the growth is different for various ages. The high rate of growth is in 18 years old and it is 176.8 Cm. Among boys of Qashqai weight has a gradual growth from 6 to 18 years old, and the high rate among them is 62.3 Kg in 18 years old. The outcomes of the research show that in any age their height and weights are lower than NCHS standards. According to diets of Qashqai girls their daily energy supply is low in comparison to WHO standards. Qashqai girls have faced malnutrition. The low social, economic, educational, healthiness situation, poor quality and inadequate of food intake and economy below subsistence level and poor income have effective role on person's nutrition and there is a positive and important relation between monthly income and energy supply. Therefore, it is necessary to have a multidimensional planning for solving of this problem.

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