

Households' Dietary Habits and Food Consumption Patterns in Derna-Libya

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Abstract

Since the beginning of the crisis in 2011, over 3 million people have been affected across Libya. According to 2017 Humanitarian Needs Overview, an estimated 1.3 million people are in need to humanitarian assistance, including approximately 241,000 internally displaced persons (IDPs). A household (HHS) is a social unit consisting of a person living alone or a group of persons who sleep in the same housing unit and have a common arrangement in the preparation and consumption of food. This study was performed among only Libyan households in Derna city, consists of seven districts. Libyan HHS whose salary ranged from 400-600 Libyan dinars represented about 15%, while 23.33% from up to 1000 LYD. The previous study results among men and women suggested that high level of leisure time physical activity (PA) reduced the risk of CVD in a range of about 20 to 30 percent, compared to the risk of those with low level of PA at leisure time. The classic diet-heart hypothesis posits that diets high in saturated fatty acids (SFAs) and cholesterol and low in polyunsaturated fatty acids (PUFAs) raise serum total and LDL cholesterol, which in turn increase the risk of coronary heart disease (CHD). This study revealed that about 72% physical inactivates, which leads to increase of NCDs such as Coronary Heart Disease, high blood pressure, and DM. Our results showed that 87% consumed high fried foods may link to an increased risk for type-2 diabetes, and Hypercholesterolemia. Hypertension is the heights NCDs among Libyan households individual (42%).

Key Words: Households, Composition of Food, Derna City, Physical Inactivates, Fried Foods.

INTRODUCTION

A balanced healthy diet is essential for healthy growth and development ^(1, 4). A population group defined food consumption patterns as repeated arrangements

observed in food consumption. They are embedded in types and quantities of foods and their combinations into different dishes or meals. Food consumption patterns depend on several factors such as personal preference, habit, availability, economy, convenience, social relations, religion, tradition, culture and nutritional requirements. It decreases the risk of chronic diseases ^(2, 5) and is affected by basic factors such as socioeconomic status ^(3, 6). The food supply of Libya is very abundant. The supply of major food groups has increased markedly overtime.

Fruit, vegetables, pulses and vegetable oils have more than doubled between 1965/67 and 2000/02. Starchy roots increased six-fold during the same period ^(4,7,8). This study aimed to describe dietary habits among Libyan households, investigate the problems related to inadequate quantity and quality of habitual diet and supplements, and provide a basis for strategies to improve dietary consumption among Libyan households.

Literature Review

A household is a group of people who normally live and eat their meals together in the household, and acknowledge the authority of a man or woman who is the head of household ⁽¹⁾. The food supply of Libya is very abundant. The supply of major food groups has increased markedly overtime. Fruit, vegetables, pulses and vegetable oils have more than doubled between 1965/67 and 2000/02. Starchy roots increased six-fold during the same period. The increasing trend in food supply from 1965/67 can be explained by the prosperous economy due to oil production. During the 1980's, for several food groups such as cereals, meat, milk, eggs, fruit and vegetables, there was a decrease in supplies due to changes in national policies which aimed to reduce imports and rely more on local production to meet the country's food requirements ⁽³⁾. Usually, in Libya, there are three meals a day, lunch being the main meal ⁽⁴⁾, and milk is consumed mainly for breakfast, with increased consumption in the month of fasting Ramadan. Meat, principally poultry, lamb, mutton, beef or camel, is an important part of Libyan meals.

As income rises, people switch to more expensive foods such as meat, fruit, and luxury foods and at low income level, the cheap foods such as potatoes, bread, sugar and rice are the main source of energy ⁽⁶⁾.

Material and Methods

1) Study Design and Population

Derna is one of the municipalities of Libya. It is located in the northeast of the country. It is about 300 Km east of Benghazi, the second largest city in Libya. Derna has a shoreline on the Mediterranean Sea.

Stratified random Sample was collected in different districts in Derna city by used a questionnaire answer about all questions. Derna is divided into seven administrative areas including:(Alblad ,Sahashrgi , Bab tobriq , shyhaa , Almagar , Alftayah , and Hay alsalam). The study was performed among only Libyans households in Derna city, consists of seven districts. Participation in this survey is voluntary Information relating to the family demography (family size, family type, frequency of food intake was obtained using interview questionnaire. This survey was collect from June 2017 to October 2017.It included 60 households.The diet survey was conducted using a food frequency questionnaire in Arabic language, including two sets of sections, first section including socioeconomic characteristics of the households (age, income, and family members) and general questions.Second part consisted of food consumed during the previous 24 hours recall (24 hrs-recall) ,as well as food frequency questionnaire (FFQ) which consisted of listing all food and beverages consumed according to food groups.

2- Data Collection

The questionnaire was distributed randomly to staff members and students from College of Medical Technologyl, health institutions, and some family members of neighbors. Each participant recorded what they ate and drank during the previous 24 hours recall as well as food frequency questionnaire (FFQ). A total of 60 household were selected from seven different administrative areas for assessment of food consumption during 24 hrs- recall as shown in Table 1. Any answer by suspected questionnaire or incomplete answer was excluded from the study.

Table 1:Shown the Administrative Area and Number of Households in DernaCity.

Administrative Area	Household No.
Al-Belad	17
Bab-Tobrok	5
AL-sahel	11
Sheha	8
Al-Magar	9
Al-fataih	3
Hay-Alsalam	7
Total	60

3- Statistical Analysis

Only Libyan household were included in the survey. This study used 60 households (HHS), from 7 administrative area, HHS surveys used for this analysis are converted to the Excel 2013© for Windows Copyright 2007.

Results and Discussion

Food items of households survey (HHS) are categorized in 9 major food groups (Meat, chicken, fish, eggs, Milk, cheese, Fruits, vegetable, and beverage). 15% of the monthly income was from HHS whose salary ranged from 400-600 Libyan dinars, while 23.33% from up to 1000 LYD, as shown in Figure 1.

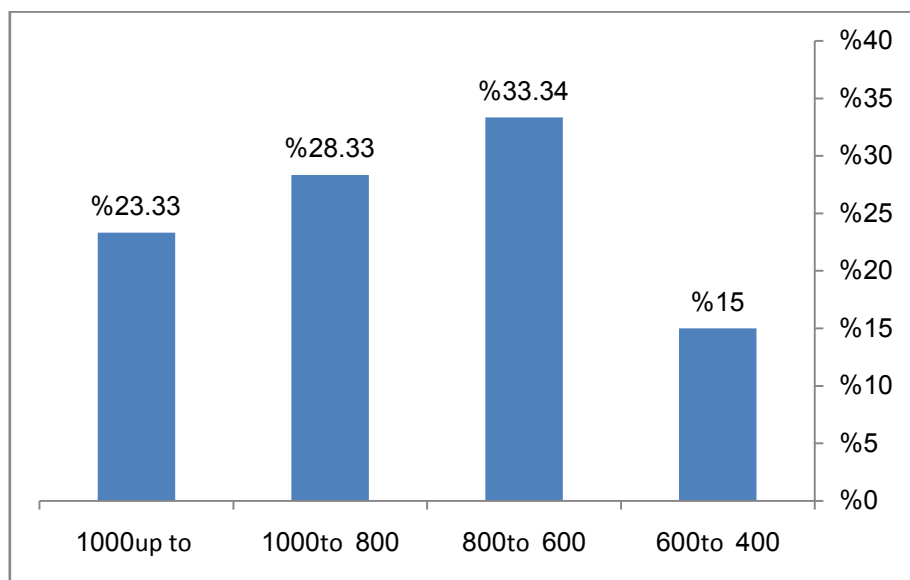


Figure 1: The Percentage of Monthly Income of Households.

This study revealed that 35% have up to 8 members living in households while 18% have from 2 to 4 members, as shown in Table 2.

Table 2:Numbers of Family Members of Households.

No. of family members	Percentage (%)
2 to 4	18%
4 to 6	13%
6 to 8	34%
up to 8	35%
Total	100

The results in this study revealed that about 72% physical inactives, which leads to increase of NCDs such as Coronary Heart Disease, high blood pressure, and DM, and may expect other diseases such as obesity, breathlessness, stroke, stiff joints, osteoporosis, the results need more further studies. 95%, of households, ate simple sugar and sweets, this results may explains the increased

incidence of diabetes and expect increase overweight and obesity among householdsmembers in Derna, as shown in table 3.

Table 3:Percentage of Households Consumption from Sugar and Sweets.

Simple sugar and sweets	Household No.	Percentage (%)
yes	51	95%
No	9	5%
Total	60	100%

78%, and 73% of households consumed coffee, and tea in the morning and during day respectively, 85% of them, drank tea immediately after meals, may lead to anemia disease (iron deficiency).Our results showed that 87% consumed high fried foods may linked to an increased risk for type-2 diabetes, obesity, and Hypercholesterolemia.Hypertension is the heights NCDs among household individual, (42%), as shown in Figure 2.

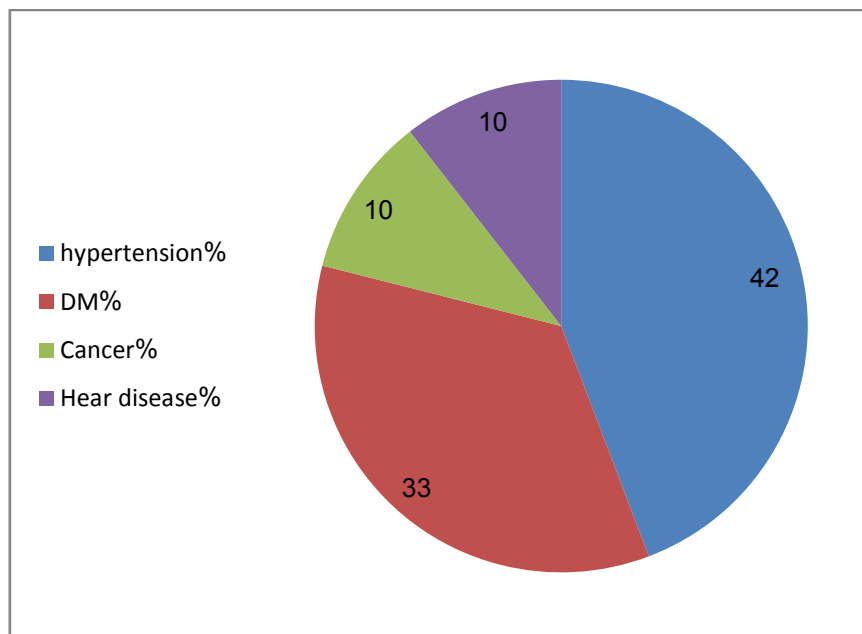


Figure 2:Different Diseases Risks from Consuming High Fried Foods.

Table 4 :Include Foods Eaten by any Member of the Household, and Exclude Foods Eaten Outside the Home.

No.		Dietary Components	No. of Household	
1	OILS	Corn oil	42	70
		Sunflower oil	13	22
		Olive oil	5	8
Total			51	100
2	MILK	Fat free	16	15
		Half creamy	13	31
		Full creamy	22	53
Total			60	100
3	Fish	Weekly	4	7%
		Daily	5	8%
		once a month	33	55%
		Not once	18	30%

Table 4: Continued

Total			60	100
4	meat	daily	7	12%
		1 to 3 times	11	18%
		from 3 to 5 times	15	25%
		Not once	13	22%
Total			60	100
5	carbohydrates	Once	22	37%
		2 TO 3	29	48%
		3 TO 5	8	13%
		More than five times	1	2%
Total			60	100
6	Chicken	daily	11	18%
		1 to 3 times	28	47%
		from 3 to 5 times	19	32%
		Not once	2	10%
Total			60	100

Highest proportion about 47%, and 32% of households consumed chicken and meat respectively from one to three times per week. 65% of households did not remove fat from meat that leads to increase incidence of coronary heart disease (CHD), hypertension, and DM. This study showed that 53% of households drank full creamy milk, and 15% fat free milk, which also explains in this study, increase of non-communicable diseases such as CHD, and hypertension. High diet consumed by Libyan households was not recommended in daily dietary pattern. It is probably that the high consumption of food rich fat, and sedentary life style played an important role in the increase of many chronic disease such as CHD, stroke, diabetes, and hypertension, as shown in Table 4. In comparison, a previous study implied that a large number of studies seem to be focusing on determinants of dietary energy consumption (or dietary quantity), at the expense of dietary quality and diversity⁽⁸⁾.

Conclusion

These results showed that 55% consumed a fish meal only one time per month. The results also implied that about 72% physical inactives, 65% of households did not remove fat from meat, decrease of omega 3 consumption, decrease of physical activity, and an increase of fat consumption. These results expect to increase the incidence of cardiovascular disease. Our goal reach to recommendation in daily dietary pattern, the main recommendation are maintaining ideal body weight, consumption complex carbohydrate, reducing of fat intake, eating fish once per week, and increasing consumption food rich antioxidants such as fruits and vegetable. Lack of awareness, low purchasing power, poor food selection and food habits etc. are the causes associated with consumed inadequate food with low to poor diversified diet. This study recommended the importance of nutrition education to household's members on hygienic food preparation and nutrition. In this study, the dietary intake data are taken from just 24 hrs recall, interview that covered one day. Household's intake of specific nutrients may vary considerably from one day to the next being high one day and low another.

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