

Studying the Economic and Health Effects of the Dietary Patterns Prevailed in the Egyptian Countryside

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ABSTRACT

The study sees that in order to improve the content of animal protein under the low average per capita – the rise in the prices of one kilo of red meat that reaches to 70 pounds, the decline in farmers' incomes. As the average of per capita share of red meat is the standard of the economic level in the developing countries especially Egypt, and as the standard of food expenditure may not reflect the economic levels in the developing countries such as Egypt, some categories in it, which are able, may overstate in the consumption of animal protein as an evidence of prosperity. The daily per capita share of red meat in Egypt is estimated at less than one quarter for what is had by its counterpart in the developed countries. Thus, the possibility of increasing the per capita share of fresh red meat under the economic conditions mentioned above is a very difficult matter, as increasing the personal income is preceded by a significant increase in the prices in general and in meat in particular. In addition, as 100 grams of meat contain 20 grams of protein, and the price of one kilo gram of fresh meat reaches to about 70 pounds, as mentioned above, so the price of 100 grams of meat reaches to about 7 pounds. The researcher sees about that every person must meet his needs of red meat protein by replacing fresh meat with their frozen counterpart with validating them, as the price of one kilo of them reaches to about 45 pounds, which means that the price of 100 grams of frozen meat reaches to about 4.5 pounds.

Key words: Egyptian countryside – dietary patterns – animal protein – health and economic effects

Introduction

Poverty and the low standard of living for a vast sector of peasants are the factors determining dietary pattern in the Egyptian countryside, as well as raising the prices of the vast majority of food commodities. The deterioration of the living standard of peasants extends to include the inability to spend money on prevention procedure such as providing the integrated healthy food. When individual's consumption is less than what he needs, this leads to many health problems having a serious impact. Diseases of malnutrition, such as lack of animal protein and calories make children and adults suffer of anemia. Various studies have shown that mother and fetus are influenced by the lack of nutrition during pregnancy, especially protein which affects fetus since the beginning of its formation especially when mother has an earlier history in malnutrition. In addition, weight and the completeness of skeleton are improved when children who suffer from malnutrition are provided with protein-rich food. The breaking down of about 904 peasants has increased after 1992 (the issuance of the law of 96 which stipulated on grabbing the lands of tenants), and about 3.5 million people are entirely depending on them, as this number is the approximate number of their family members. Most of their incomes have become spent on food, which no longer contains the proteins such as dairy, eggs and meat. However their food has been limited to grains, starches and legumes that are eaten every day permanently.

Problem of Study

The problem of study is represented in malnutrition diseases from which the majority of peasants and their families are suffering. Malnutrition disease are resulted from their dietary pattern, as their daily food is no longer contains the animal protein needed to protect their bodies from diseases which costs them and the state a lot of money to provide the expenses of treatment as well as its impact on their ability to work.

Aim of Study

The study aims to identify the dietary patterns of farmers in the sample of the study as well as identifying the economic, social and health effects resulted from those patterns and how to improve them in order to overcome health problems that threaten the Egyptian farmers and form a burden on the Egyptian economy.

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Research Method and Data Resources:

The study has relied on the descriptive and quantitative methods and some economic indicators in analyzing data and presenting the results it reached to. It has relied on the published and unpublished public data released by the Central Agency for Public Mobilization and Statistics and the Ministry of Health. A questionnaire form has been designed and collected from three Egyptian governorates these are, Al-Beheira, Al-Sharqia and Kafr Al-Sheikh by 50 forms for each governorate.

The Results of Study:

It has been shown from the sample of the study that the marital status of all the samples of the study is married and has children. For the educational status, it is shown that about 40% of the persons of the sample have a high qualification, 25% have a high school degree, 10% are illiterate and 25% can read and write. The number of family ranges between 3-8 persons. The cultivated area ranges between 1-12 acres. 45% of the samples of the study are owners of the lands; however, 55% are tenants. As for the sources of income of the persons of the sample of the study, it is shown that the sources of income of the holders and all of them are less than one acre. The income from agriculture represents about 50%, animal production about 20%, 10% of working for others and 20% free business.

The Average of Per Capita Share and the Annual Expenditure of Food Groups

It is shown from table (1) that the average of per capita share per day of (grains, starches and legumes) has reached to about 804 grams, which exceeds the level recommended globally per day by about 41%. As for fruit, the per capita share exceeds the global level by about 271%, however, the average of per capita share of sugar and sugary food has exceeded the global level by about 73.8. Also, it is shown from the same table that the average of per capita share of protein represented in (meat, poultry, fish and eggs), (dairy), (oils and fats) has become less than the level recommended globally by about 24.3, 5.2, 91.5 for each of them, respectively, which refers to the imbalance in the Egyptian dietary pattern in general. When taking into account the average of the monthly household expenditure on food groups, it has been shown that the highest value of spending was for the group of meat, poultry, fish and eggs by about 480.3 pounds. However, the less monthly household expenditure was for the group of oils and fats by about 106.5 pounds per month. Also, it is shown from the same table that the total of the money spent monthly on food groups has reached to about 1634 pounds. The spending on animal protein (the third and fourth groups) has reached to about 52.3% of the total expenditure on food groups, however, the daily average of per capita share of it declines by about 29.5% less than the level recommended globally.

Table 1: The Average of per Capita Share and the Monthly Expenditure of the Different Food Groups and the Level Recommended Globally during 2011/2012.

Food Groups		The Level Recommended Globally in Grams per Day	The Average per Capita per Day					The Average of the Monthly Expenditure in Pounds
			In Grams	%	Kcal / No	Protein / Grams	Fat Gram	
The first	Grains, starches, dry legumes	569.4	804	41	2562	74	12.5	283.8
The second	Fresh vegetables + fruit	423.3	1570.3	271	244	4.5	1	276.4
The third	Meat, poultry, fish, eggs	121.6	91.8	- 24.3	127	16.6	10.6	480.3
The fourth	Dairy	204.9	215.9	-5.2	168	7.7	10.7	376.2
The fifth	Sugar, sugary foods	73.8	127.6	72.5	4.81	-	-	111.3
The sixth	Oils and fats	75.2	6.7	-91.5	439	2	5.47	106.5

Source: 1- the Central Agency for Public Mobilization and Statistics-food balance, 2012/2013

The research of the income, expenditure and consumption for 2012.

The Dietary Patterns of the Persons of the Study Samples

Achieving food security means providing food in the quantity and quality necessary to the needs of population in prices commensurate with their purchasing abilities, as the average of per capita share of animal protein is one of the indicators and benchmarks of progress and prosperity for peoples. It is not preferred from a health standpoint to replace vegetable proteins totally with animal proteins because they contain the amino acids

that are necessary and indispensable to the body. The average of per capita share of animal protein is shown from table No (2), as it is shown that about 20% of the persons of the sample do not eat red meat except 100 grams per week which means that they eat about 14 grams of red meat per day. However, the average of per capita share for about 70% of the persons of the sample ranges between 150 - 300 grams, and about 10% only of them have not exceed about 750 grams of red meat per week. From the above it is clear that the average of per capita share of meat for about 90% of the persons of the sample does not exceed about 200 grams per week, equivalent to 28.6 grams per day. As for poultry, the average of per capita share for about 80% of the persons of the sample has reached to about 175 grams per week, equivalent to 25 grams per day. However, the average of per capita share for about 20% only of the persons of the sample has reached to about 1 km per week, equivalent to 142.5 grams per day. As for fish, it has been shown that the average of per capita share for about 80% of the persons of the sample has reached to about 212.3 grams per week, equivalent to about 30.2 grams per day. However, the daily average of per capita share, for about 20%, of fish does not exceed 142.5 grams. As for eggs (albumin), they are the ideal protein compared to the other types of protein. 100 grams of eggs (which are equivalent to two medium-sized eggs) provides about 24 grams of protein. It has been shown from the sample of the study that the average of per capita share for about 50% of the persons of the sample does not exceed 150 grams per week, equivalent to about 21 grams per day, no more than 3 eggs per week. As for the remaining proportion of 50%, the daily average of per capita share of eggs has reached to about 50 grams per day, which means that it does not exceed one medium-sized egg. As for the dairy, it has been shown from the study that the daily average of per capita share for about 50% of the persons of the sample has reached to about 78 grams. The daily average of per capita share for the other half has reached to about 125 grams.

From the above it is clear that the daily average of per capita share of red meat for about 90% of the persons of the sample does not exceed about 28.3 grams. However, the daily average of per capita share of poultry for about 80% of the persons of the sample reaches to about 25 grams per day. As for fish, it has been shown that the daily average of per capita share for about 80% of the persons of the sample does not exceed about 30.2 grams. In addition, the average of per capita share of eggs for about 50% of the persons of the study does not exceed about 21 grams per day. Compared to the level recommended globally, it is assumed that the average of per capita share of (meat, poultry, fish and egg) per day reaches to about 121.6 grams per day. This means that the average of per capita share of animal protein in the sample of the study for red meat, poultry, fish and eggs, respectively does not exceed about (23.2%, 20.3%, 24.5% and 29.1%), compared to its global counterpart. As for the dairy, it has been shown that the average of per capita share for about 50% has reached to about 38.4% compared to its global counterpart. Thus, more than 90% of the sample of the study cannot get in their daily diet except about 25% of the level recommended globally. This may be due to the low wages (especially after the issuance of the law of grabbing the lands of tenants in 1992 and the rise in the rental value of land), which do not fit with the skyrocketing prices of food commodities in general and animal protein in particular, as the price of fresh red meat per kilo gram reaches to about 70 pounds in the markets and about 45 pounds in the complexes of consumption. As for the prices of poultry, the price of one kilo gram reaches to about 25 pounds, and the price of one kilo of tilapia fish reaches to about 17-20 pounds. However, the price of one egg reaches to about 80 piasters, and the price of one kilo of non-canned milk reaches to about 8 pounds. This has resulted in the dietary pattern prevailed in the sample of the study through replacing vegetable proteins, starches and fillers completely with animal proteins, and the deterioration of health and social cases of the vast majority of the persons of the study sample.

Table 2: The Average of per Capita Share of Animal Protein per Week for the Persons of the Sample

Persons of the Study	Red Meat	Persons of the Study %	Poultry Grams	Persons of the Study %	Fish	Persons of the Study %	Eggs Grams 1)	Persons of the Study %	Dairy Grams
20	100	10	100	20	100	30	100	40	500
10	150	20	150	30	200	20	200	10	600
10	200	30	200	20	250	10	300	30	750
40	250	20	250	10	300	40	400	20	1000
10	300	20	1000	20	1000	-	-	-	-
10	750	-	-	-	-	-	-	-	-
100	1750	100	1700	100	1850	100	1000	100	2850

Source: calculated and collected from the forms of field sample.
 (1) 100 grams of eggs are equivalent to two medium-sized eggs.

The Economic and Health Effects of the Dietary Pattern Prevailed in the Sample of the Study

Research groups belonging to the American Academy of National science has concluded that the severe malnutrition in the early stages of age affects the mental progress significantly more than the social and family effects, which means that neglecting the aspects of nutrition and convenience is a health disaster by all standards. It has been shown from the sample of the study that about 80% of the persons of the study suffer from

malnutrition diseases and depend almost completely on starches and the fillers of stomach, which make their bodies a fertile ground for many diseases, especially with the ingrained bad social habits such as bathing in the channel, getting rid of sewage in drains and channels and locate stockyards at homes (with the absence of the guiding and health roles in the Egyptian countryside). All these things have led to the outbreak of schistosomiasis in about 20% of the persons of the sample, virus C in about 26% of the persons of the sample, kidney diseases by about 15% and other diseases by about 19%. They were not able to recover from them because of the deterioration of the health units and government hospitals, available in those villages, which do not provide the effective treatment for them due to the lack of it and because of its high prices. In addition, their low financial ability does not enable them to nurse at their own expense due to the decline in the income in general for all the persons of the sample. This results in declining the number of their work hours to more than 50%, which is an economic loss estimated at almost the half of employment. It has been shown from the questionnaire form in the field sample that the daily wage of worker reaches to about fifty pounds. He receives it for working for only five hours a day. Worker's wage per hour reaches to about ten pounds (the opportunity cost), which increases the burdens on simple farmers. The value of the economic losses for the injured which are about (50% of the persons of the sample), whose work hours has declined from 7 to 5 hours, has been estimated at about 30.7 billion pounds. Moreover, the value of the loss for about 30% has reached to about 18.4 billion, which has been resulted from declining the number of work hours from 9 to 5 hours a day. As for the remaining percentage of 20% (their work hours have been declined from 11 to 7 hour), and the value of loss has been estimated at about 12.3 billion pounds, at a total loss reached to about 61.4 billion pounds per year. This is in addition to what the general state budget incurred of costs of treatment of those diseases, which are estimated at about 590 million pounds in 2011.

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