Innovations

A sample of people's attitudes towards consumption of processed foods... A Prospective Study

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Abstract

Introduction: *It is necessary to consume healthy types of foods that provide the body's needs of all the basic elements and to stay away as much as possible from foodstuffs that contain industrial additives that may have a harmful effect on physical health.* ***Methods:*** *A study was conducted on randomly 400 persons from Baghdad city. The questionnaire included demographic inquiries as well as eating behaviors of consumers in relation to commercially processed foods and soda containing additives phosphate (hamburger, pizza, instant noodles, and soda).* ***Results :*** *Most of the sample was not aware of the additives phosphate in processed food and drinks, and most of the sample did not know the harmful effect of more phosphate in the diet. However, the main sample identified the high sugar of soda. The sample is insufficiently aware of the risks related to high quantity for long periods of phosphate intake and they do not have sufficient awareness of food and drinks containing additive phosphate.* ***Conclusion:*** *This study confirms necessary the raising healthy consciousness to the hazards of excessive processed food and drinks with additives phosphate. Reducing as much as possible intake foods with additives phosphate. Work to conduct more studies to use food additives that are less threatening the physical health.*

Key words: *1. Phosphate, 2. Fresh,3. Processed, 4.Food, 5.Lifestyle*

Introduction

A healthy diet provides nutrients and energy to the body, which include proteins, carbohydrates, fats, vitamins, and minerals. Vegetables, fruits, meat and grains are important in a healthy diet and are widely used as essential meals. Sometimes, the diet does not include all these ingredients as fast foods, whichis often a processed food. [1]. Processed foods often contain a high amount of refined sugar, salt, or saturated and trans fat, these components are often associated with obesity and many non-communicable diseases (NCDs) like autoimmune diseases, strokes, most heart diseases, most cancers, diabetes, chronic kidney disease, Alzheimer's disease, and others.[2]

Phosphate is an essential mineral in the human body, dysregulation of this mineral can affect the functions of almost organ systems[3]. Phosphate is routinely consumed through food which are both organic and inorganic forms and consumed in meat, fish, eggs, dairy products, and vegetables.Consumers have seen product labels, but many do not know its properties and how much can be used without risk.. In recent years, intake phosphate as stabilizers has increased worldwide, particularly in countries with high consumption of processed foods. There are eight types of phosphates areused in the food industry, whichindicated asroman numerals[4].The most additive products actively uses are called Potassium and sodium di-phosphates(E 450) including Sodium and potassium pyrophosphate. Longer use of E450 even in the smallest doses the calcium and phosphorus will begin to digest poorly,calcium will be deposited in the kidneys formed renal calculi, and may be pathetic bone tissue and tooth[5].Recent studies have shown increased phosphate levels in the blood may be caused the premature aging, vascular and renal diseasesalso turns out to be the most important cause of mortality [6,7]. Therefore, health care providers should educate their patients about the dangers of commercially manufactured foods and drinks that are often rich in additive phosphate. In contrast to sodium and other element, it is difficult for patients to avoid foods rich in phosphate.It should be noted that the number of chronic kidney patients is increasing despite recent developments in biomedical sciences, and the global spread is estimated at 500 million[8,9]. The world may have been rid of plague, smallpox, and other diseases that kill humans, but a new group of diseases imposed by modern life has emerged, such as types of cancer, obesity, immune and psychological disorders, and others[10].

The study aimed to identify and estimatethe behaviors in the consumption of fast food such as burgers, sausage, pizza, noodles and soda,as well as investigate the sample's awareness toadditives phosphate in foods and drinks (hamburger, pizza, instant noodles and soda)for a random sample of consumers in Baghdad city.

People and Methods

Study design: An analytical, descriptive study.
Study sample: Randomly four hundred individuals from the community sample.
Location of the interview: The cases were interviewed at the markets of Baghdad city such as Al-Bayaa, Bab Al-Maazem, Al-Kadhimiya and Al-Karada, including 6 markets in Baghdad.
Setting of the study: The questionnaire was designed and data were collected from June to September 2021. All people participated voluntarily and no one refused to answer and complete the survey questions after a meal at a restaurant or while shopping in the markets. Focus on foods and drinks rich in additive phosphate(burgers, pizza,sausage, instant noodles and soda).

The questionnaire style included two parts:

Part 1: Demographic Questionnaire: Information collected from each participant includes gender, age, financial level and residence. Table 1 showed that the number of males is close to that of females, aged 30-72 years, with a mean of 50 ± 12 years, mostly in twenties 51% male and 49% female, lived ≥ 5 years in the city of Baghdad or its suburbs.. The results also showed that most of the sample members enjoy a good financial level as well as from urban areas.

Part 2: The questionnaire included several questions about attitudes towards the consumption of processed foods (burgers, sausage, pizza, noodles and soda)**.**It also included the inquiry about the knowledge of presence the additive phosphate in these foods, and their knowledge of the impact on physical health.

Statistics: Thedata were described and analyzed in statistical program SPSS version 22 to compare variable's value, and estimatehazard factors at a significance level of less than 0.05 in the 95% confidence intervals (CIs).

Results

In this study, as in table 2, the levels of awareness of processed food and drink with additive phosphate (burger, pizza, instant noodle and soda), most the sample, 95% was not aware of the presence of rich additive phosphate in foods and 85% did not know the harmful effect of raising in the diet. However, most of the sample 90% were identified by the high sugar content of commercially available soda, while only 5% were distinguished by the presence of rich additive phosphate in the soda.

In table 3 showed, more than one third of the sample (36%) consumes soda drinks daily, most of them were male with a significant value (p, 0.001) for example; more than a third of the sample consumed a 500ml can of soda once a day, mostly were males. In addition, there was a difference between the sexes in the consumption of fast food, but not with significant value (p, 0.122). It is remarkable that approximately 45% of the sample ate one of this fast food daily, and nearly one third of the sample were males

Discussion

Food habits change rapidly due to fast urbanization with the improvement of the financial situation around the world. People eat more foods from animal sources, refined sugar, fats and oils cereals and processed foods, even in low- and middle-income countries[11]. The phosphate additives are useful in prolonging shelf life, enhancing flavor, retaining moisture, and improving the color of the food item[10]. More importantly, 80% were not aware of the harmful potential of consuming food with amounts of additive phosphate for a long period. As well as table2 appeared, (90%) of the participants were aware of the presence extreme sugar in soda, while only 5% were aware of the presence of additive phosphate, showing a huge awareness gap among the participants. Despite these findings, the sample seemed to lack awareness about the dangers of additive phosphate in foods and drinks. 70% of them were eager to obtain information regarding phosphate, and 80% were willing to consider reducing their intake of synthetic phosphate by decreasing consumption of processed foods and soft drinks. This is consistent with the opinions of many studies [12].

Perhaps the reason is due to the large availability of fast food, including food and drink, at reasonable prices, and perhaps due to the improvement of the financial conditions the large segment of Iraqi society lead to resort to ready-made food . On the other hand, the weather in Iraq is most often hot dry, which leads to excessive consumption of these drinks. Previous studies have shown that daily consumption of unhealthy drinks may have a role in causing many serious health problems. Otherwise green tea, for example, which is taken daily by almost 87% of Japanese adults and 40% of school students. This drink may have a role in maintaining the good health [13,14].

Nutrition experts, including doctors, nurses and academics should work to educate patients and people to reduce complications abnormal metabolism by increaseconsume healthy diet to get healthybody[15]. There are controversies about phosphate additives to food that can have an impact on personal health in the long term. The kidney is a major organ involved in phosphate turnover, consuming excessive phosphate is likely to put additional burden on kidneys in the elderly with compromised renal functions [16]. The kidney is the most important organ that can be affected by external influences to which the body is exposed, such as microorganisms or chemicals as phosphates. The function of the kidney is necessary to maintain water, electrolyte, and mineral ion balance and eliminate metabolic waste. The Kidneys are overburdened with excessive and prolonged consumption of additive phosphate [17, 18].

Conclusion

Finally, the survey results highlight two important points: The sample is insufficiently aware of the risks related to high quantity for long periods of additive phosphate intake and they do not have sufficient awareness of food and soda drink that contain additive phosphate. The survey revealed the need to raise awareness of the risks of diets containing hidden phosphate additives. Reduce as much as possible the intake

of these foods and work to include more fresh food in the daily meals. We also recommend conducting more research and studies on ways to preserve food without harmful side effects.

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Table 1: Demographic features of the Study Sample

Variables	No. of cases	%
Gender		
Male	176	44
Female	224	56
Total	400	100
Age (years) Mean: 48 SD ±12, Average (26-73)Mean		
Age		
≤ 20	140	35
30	68	17
40	92	23
50	20	5
60	56	14
≥70	24	6
Total	400	100
Financial level		
Good	160	40
Medium	220	55
Weak	20	5
Total	400	100
Residence		
Urban	336	84
Rural	64	16
Total	400	100

Table 2: Awareness levels related to food and drink with additive phosphates (hamburger, pizza, and instant noodles and soda)

Characteristics of attitudes	Details	No.	%
Do you know the presence of phosphate compounds in foods?	Yes	20	5
	No	380	95
Did you know the high sugar content of commercially available soda drinks?	Yes	360	90
	No	40	10
Do you know the harmful effect of consuming large amounts of phosphate for a long time in the body?	Yes	340	85
	No	60	15
Would you like to get information about phosphates?	Yes	280	70
	No	120	30
Do you want to reduce processed foods and drinks that contain phosphate compounds?	Yes	320	80
	No	80	20
Total		**400**	**100**

Table 3: Frequency of taking fast food and soda daily, weekly, and monthly in both genders

Gender No.	**Consumed of fast food**			**Total**	**Pearson Chi-Square Tests**
	Daily	**Weekly**	**Monthly**		**Value,df,Sig.**
Male	128 (32%)	60 (15%)	76 (19%)	264 (66%)	4.223[a], 2, 0.122
Female	56 (14%)	48 (12%)	32 (8%)	136 (34%)	
Total	148 (46%)	108 (27%)	108 (27%)	400 (100%)	
Gender No.	**Consumed of drink of soda**			**Total**	**Value, df, Sig.**
	Daily	**Weekly**	**Monthly**		
Male	136 (34%)	40 (10%)	48 (12%)	264 (56%)	14.035[a], 2, 0.001
Female	8 (2%)	88 (22%)	8 (2%)	136 (44%)	
Total	144 (36%)	128 (32%)	56 (14%)	400 (100%)	