
EFFECTS OF PRESERVED FOOD ON HUMAN HEALTH

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ABSTRACTS

In this study on the effects of preserved food on human health, it was observed that some respondents have experienced negative effects of preserved food on their health and this was as a result of taking too much of the preserved foods like. Sugar, Milkose, chocolate, vegetable oil, grains' stored with pesticides, butter, dried fruits and alcohol. The study showed that chocolate foods contain cadmium and nickel. These heavy metals accumulate in human body and can cause permanent damage to body organs; the Journal of Food Composition and Analysis said that processed chocolate had unsafe levels of cadmium and nickel. Also Saulo, (2005) confirmed that chocolate foods caused carcinogenic respiratory tract diseases. In this research study 31.6% of the respondents agreed that sugar caused diabetes and heart diseases, as confirmed in ([http://www.assedu.co.uk/inf/Alternative living/ self - sufficiency/sugar in - in food – preserving.aspx](http://www.assedu.co.uk/inf/Alternative%20living/self-sufficiency/sugar-in-food-preserving.aspx) (2017) that excess consumption of sugar is associated with obesity, diabetes and heart diseases...Eating small amounts of food preservative may be safe, but eating too much of processed foods, increases the odds of becoming obese or being diagnosed with high blood pressure, heart disease or cancer.

INTRODUCTION

Food is any substance or material eaten to provide nutritional support for the body or anything eaten for pleasure (Francis, 2000). Food preservation is the process of treating and handling foods to stop or slow down spoilage (loss of quality or nutritive value) of foods by microorganisms. Food preservation is the science of preserving food by canning, fermentation, salting and drying (Food Preservation Methods 2013). Foods preservation history dates back to the era of ancient civilization. But the dramatic change and advancement in food preservation started from 18th century. The progress of science in 18th and 19th century has influenced food preservation methods and process (Stuart, 1986). During the 18th century drying, canning, sugaring, salting, pickling and cold storage were some of the most common methods of preserving foods, but when the population and food quantity started to

increase people needed something higher than the natural food preservation. And this was when trained scientists came up with new methods of food preservation known as preservatives.

Foods are of plants or animals origin, which contains essential nutrients, such as carbohydrates, fats, oil, proteins, vitamins and minerals. Although preservatives have been used for centuries, there has always been concern regarding the safety of consuming preservatives foods. (Branen et al, 2002). Preservative foods have negative effects on people's health; the first real concern regarding food preservatives was expressed by Willey Bennion, (1980). His work led to the first regulation to control the use of preservatives in foods (Branen et al,2002).

During this our research study questionnaires were used for data collection.

Distribution and Analysis of the Questionnaire

Table 1: Distribution of Questionnaire

Respondent Question	Distribution of Questionnaire issued out	Returned	Lost
	100	95	5
Total	100%	95	5

Source: Field Survey 2017-2020

Out of the hundred Questionnaires that were administered to the respondents, 5 were lost because of the technique adopted by the researchers. A method that could be described as allowing respondents to go home with the Questionnaires, filled and returned. In this method, the respondents were allowed to go home with the Questionnaires to stay overnight filled and return them the next day.

Collection and Analysis of the Questionnaires

Table2: Distribution of the Respondents According to Their Biodata Characteristics (n = 95)

Respondent	Frequency	Percentage (%)	Mean (X)
Sex			
Male	55	57.9	1.42
Female	40	42.1	
Total	95	100	
Age (Years)			
18 – 25	54	56.8	1.75
26 – 35	21	22.1	
36 – 45	10	10.5	
46 & Above	10	10.5	
Total	95	100	
Educational Background			
Non formal education	6	6.3	3.23
Primary education	7	7.4	
Secondary education	41	43.2	
Tertiary education	41	43.2	
Total	95	100	Total
Do you take soft drinks?			
Yes	79	83.2	1.17
No	16	16.8	
Total	95	100	Total
Do you know that Coke & Fanta Cause diabetes?			
Yes	50	52.6	1.47
No	45	47.4	
Total	95	100	Total
Do you know that chocolate Cause carcinogenic respiratory disease?			
Yes	36	37.9	1.62
No	59	62.1	
Total	95	100	Total
Do you take Pudding?			
Yes	55	57.9	1.42
No	40	42.1	
Total	95	100	Total
Do you know that Pudding can be Toxic to brain cells?			
Yes	26	27.4	1.73

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No	69	72.6	
Total	95	100	Total
Do you know that soft drinks Cause kidney disease?			
Yes	59	62.1	1.38
No	36	37.9	
Total	95	100	Total
Do you leak milkose?			
Yes	59	62.1	1.38
No	36	37.9	
Total	95	100	Total
Do you know that milkose Can cause damage to your teeth?			
Yes	83	87.4	1.13
No	12	12.6	
Total	95	100	Total
Has Fanta & coke ever cause you Problem?			
Yes	27	28.4	1.72
No	68	71.6	
Total	95	100	Total
Do you take sugar?			
Yes	84	88.4	1.12
No	11	11.6	
Total	95	100	Total
Has sugar ever cause you any Problem?			
Yes	30	31.6	1.68
No	65	68.4	
Total	95	100	Total
Do you take Doughnut?			
Yes	71	74.7	1.25
No	24	25.3	
Total	95	100	Total
Has Doughnut ever cause you any Problem?			
Yes	24	25.3	1.75
No	71	74.4	
Total	95	100	Total
Has any preserved food ever cause Problem in your body?			

Yes	34	36.8	1.64
No	61	63.2	
Total	95	100	Total
Do you take alcohol eg. beer?			
Yes	55	57.9	1.42
No	40	42.1	
Total	95	100	Total
Has alcohol ever cause you any Problem?			
Yes	24	25.3	1.75
No	71	74.7	
Total	95	100	Total
Do you take vegetable oil?			
Yes	82	86.3	1.14
No	13	13.7	
Total	95	100	Total
Has vegetable oil ever cause you any problem?			
Yes	28	29.5	1.71
No	67	70.5	
Total	95	100	Total
Do you take whipped or icecream?			
Yes	43	45.3	1.55
No	52	54.7	
Total	95	100	Total
Has whipped or ice cream ever caused you any problem?			
Yes	28	29.5	1.71
No	67	70.5	
Total	95	100	Total
Do you take soup bases?			
Yes	45	47.4	1.53
No	50	52.6	
Total	95	100	Total
Has soup bases ever cause you any Problem?			
Yes	19	20.0	1.80
No	76	80.0	
Total	95	100	Total
Do you take butter?			

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Yes	37	38.9	1.61
No	58	61.1	
Total	95	100	Total

Has butter caused you any problem?

Yes	17	17.9	1.82
No	78	82.1	
Total	95	100	Total

Do you take grains stored with chemicals?

Yes	46	48.4	1.52
No	49	51.6	
Total	95	100	Total

Has grains stored with chemicals ever caused you any problem?

Yes	32	33.7	1.66
No	63	66.3	
Total	95	100	Total

Do you take potato chips?

Yes	56	58.9	1.44
No	39	41.1	
Total	95	100	Total

Has potato chips ever caused you any problem?

Yes	22	23.2	1.77
No	73	73.8	
Total	95	100	Total

Do you take bread?

Yes	57	60.0	1.40
No	38	40.0	
Total	95	100	Total

Has bread ever caused you any problem?

Yes	12	12.6	1.87
No	83	87.4	
Total	95	100	Total

Do you take dried fruits eg. Cashew nuts?

Yes	52	54.7	1.45
No	43	45.3	
Total	95	100	Total

Have dried fruits ever caused you any problem?			
Yes	17	17.9	1.82
No	78	82.1	
Total	95	100	Total
Do you take preserved meat?			
Yes	77	81.1	1.19
No	18	18.9	
Total	95	100	Total
Has preserved meat ever caused you any problem			
Yes	14	14.7	1.85
No	81	85.3	
Total	95	100	Total

Source: Field Survey 2017-2020

Food types, preservatives and their health affect.

Preservatives extent the life span of foods, but shorten the life span of the consumers. Below is a tabulated summary of food types, preservatives and their health effect. Note that food preservatives are chemicals that preserve foods, but the same chemicals were found to be harmful to human health.

Table 3: Summary of foods types, preservatives and their common effects

Food	Preservatives	Health Effect
Soft drinks e.g. coke and fanta	Phosphoric acid	Damage teeth (erode teeth) like battery acid, Cause kidney disease
Preserved meat	Sodium nitrites Potassium nitrite and Butyrate hydroxytoluene (BHT)	Inhibits red blood cell from transporting oxygen around the body causing fatal respiratory problems like leukemia, and brain tumor. Irregular heartbeat, convulsion, coma, cancers, dizziness and headache.
,Sugar	Acidulants, Benzoic,Sorbic acid, ,Lactic acid and Sulphur dioxide.	.Cause obesity, diabetes, and heart diseases.
Vegetable oils soup base, potato chips dried cereals and grains stored with chemicals.	Propylgallate.	Cause stomach irritation, liver damage, kidney damage, and colon and stomach cancer.
Chocolates	Butyratehydroxytoluene (BHT)	Increase cancer rate, toxic liver and kidney disease.
Milkose		
Bread, dried fruits and alcohol.	Ammonium Sulfate and Sulfite	Gastro intestinal diseases, skin irritation, respiratory track irritation, pulmonary diseases, hypotension and asthma
Whipped or Ice cream doughnuts and pudding.	Titanium dioxide	Cause Carcinogenic to humans' respiratory tract and cancer toxic effects on brain cells.

MATERIALS AND METHODS

This study was conducted in Lafia Local Government Area of Nasarawa State. Lafia is located within latitude 33°N and longitude 33°E. It has a total land area of about 27.33km (Nasarawa State Ministry of Information, 2006).



The Map of Nasarawa State

The population of study covered all the people in Lafia Local Government Area. A sample of 100 respondents was randomly selected for the study. Randomized sampling method was used for the selection of respondents, to enable the researchers spread all over the area of study. The 100 respondents were randomly selected from among students, community members and health workers in Lafia Local Government. The instrument used for data collection was structured questionnaire. The researcher developed the questionnaires in (2) two sections, A and B, section A covered the biodata of the respondents while section B was based on the purpose of the study. The respondents were asked to tick yes or no as apply to them. The questionnaires were administered to the respondents in their various homes schools and places of work and the completed questionnaires were retrieved. The data obtained from the respondents was analyzed using mean

RESULTS

Based on the general results of the data collected on the effects of preserved foods on human health, 95% of the respondents agreed that preserved foods caused different human health problems. This discovery actually confirmed the researched done by (Saulo, 2005)

which states that preserved foods caused many human health problems.

The data collected from the first statement which asked a question, do you take soft drinks? shows that 83.2% of the correspondents take soft drinks like Fanta, Coke, 7up and others, while 16.8% said they do not take any kind of soft drinks. Data collected from the respondents on the question, do you know that taking soft drinks like Coke and Fanta caused diabetes, shows that 52.6% of the respondents taking soft drinks did not know that soft drinks cause diabetes and never experience any negative effect of soft drink on their health. However 47.4% of the respondents were aware that coke and fanta caused diabetes and kidneys diseases, but never any disease as a result of taking soft drinks...

Analysis of the data collected on the statement that says, do you know that chocolate foods cause carcinogenic respiratory tract disease shows that 37.9% of the respondents know about the negative effect of chocolate foods on human health, while 62.1% are ignorant of the effects of chocolate foods on human health.

Analysis of the data collected from the statements, which asked, do you take pudding shows that 57.9% of the respondents take pudding, while 42.1% of the respondents do not take pudding. Analysis of the data collected on the question, do you know that pudding can be toxic to the brain cells, shows that 27.4% of the respondents taking pudding know the negative effects of pudding on human health while 72.6% are not aware that pudding can affect brain cells. Analysis of the data collected from the respondents on the question, do you know that soft drink cause kidney disease, shows that 62.1% know that soft drink caused kidney disease while 37.9% do not.

Analysis of the data collected from the respondents on the question, do you leak milkose, shows that 62.1% of the respondents leaked milkose while 37.9% do not leak milkose. Analysis of the data collected from the respondents on the question, do you know that milkose can cause damage to your teeth shows that 87.4% of the respondents taking milkose have idea of the damage effects of milkose on human teeth while 12.6% have no any knowledge that milkose affects human health.

Analysis of the data collected from the respondents on the question, has fanta and coke ever cause you any problem, indicates that 28.4% of the

respondents have suffered some human health problems as a result of taking fanta and coke while 71.6% of the respondents indicates that they have never ever experience any health problem as a result of taking coke or fanta.

Analysis of the data collected from the respondents on the question, do you take sugar. 88.4% of the respondents agreed that they take sugar. While 11.6% say they do not take sugar. Analysis of the question, has sugar ever caused you any problem? Shows that 31.6% of the respondents ever have problem caused them as a result of taking sugar while 68.4% never experience any negative effects of sugar on their health. Analysis of the question, do you take doughnut? Shows that 74.7% take doughnut, while 25.3 do not take doughnut. Analysis of the question, has doughnut ever cause you any problem? Shows that 25.6% of the respondents ever have problem with doughnuts while 74.4% never had any problem from eating doughnuts.

Analysis of the question, has preserved food ever cause problem in your body? Shows that 36.8% of the respondents ever have problem from preserved foods, while 63.2% never had any problem with preserved foods. Analysis of the question, do you take alcohol e.g beer? Shows that 57.9% of the respondents take alcohol, while 42.1% do not take any form of alcohol. Analysis of the question, has alcohol ever cause you any problem? Shows that 25.3% ever have problem with alcohol while 74.7% never had any problem with alcohol.

Analysis of the question, do you take vegetable oil? Shows that 86.3% of the respondents take vegetable oil while 13.7% do not take vegetable oil.

Analysis of the question, has vegetable oil ever caused you any problem? Shows that 29.5% of the respondents have experience negative effect vegetable oil while 70.5% never had any problem with vegetable oil. Analysis of the question, do you take whipped or ice cream? Shows that 45.3% of the respondents take whipped or ice cream while 54.7% do not. Analysis of the question, do you take butter? Shows that 38.9% of the respondents take butter while 61.1% do not take butter.

Analysis of the question, has butter ever cause you any problem? Shows that 17.9% of the respondents have ever had problem with butter while 82.1% never experience any negative effect of butter. Analysis of the question, do you take grains stored with chemicals? Shows that 48.4% of

the respondents take grains stored with chemicals while 51.6% do not take grains stored with chemicals. Analysis of the question, has grains stored with chemicals ever cause you any problem? Shows that 33.75% of the respondents were affected by grains stored with chemicals, while 66.25% never ever experience any negative effect of grains stored with chemicals. Analysis of the question, do you take potato chips? Shows that 58.9% of the respondents take potato chips while 41.1% do not. Analysis of the question, has potato chips ever cause you any problem? Shows that 23.2 of the respondents ever have problems with potato chips while 73.8% never ever experience any problem with potato chips. Analysis of the question, do you take bread? Shows that 60.0% of the respondents take bread while 40.0% do not take bread. Analysis of the question has bread ever cause you any problem? Shows that 12.6% of they respondents ever had problem with bread while 87.4% never have any problem with bread.

Analysis of the question, do you take dried fruits e.g cashew nuts? Shows that 54.7% of the respondents take dried fruits, while 45.3% do not take dried fruits. Analysis of the question, has dried fruits ever cause you any problem? Shows that 17.9% of the respondents ever had problems with dried fruits while 82.1 never had any problems with dried fruits.

Analysis of the question, do you take preserved meat? Shows that 81.1% of the respondents take preserved meat while 18.9% do not take preserved meat. Analysis of the question, has preserved meat ever cause you any problem? Shows that 14.7% of the respondents have ever had problems with preserved meat while 85.3% never experience any health problems with preserved meat.

DISCUSSION

The analysis of the data collected and the result obtained from the respondents shows that 83.2% of the correspondents take Coke and Fanta, while 16.8% do not take any kind of soft drinks. The respondents on the question, has fanta and coke ever cause you any problem? shows that 28.4% of the respondents taking fanta and coke have ever had health problems. While 71.6% of the respondents never experience any problems as result of taking fanta and coke. On the question has sugar ever cause you any problem? shows that 31.6% of the respondents have ever experience health problems as a result of taking sugar, while 68.4% never experience any challenge with taking sugar, this indicates that it is the amount of sugar consumed that matter as stated

in [http://www.assedu.co.uk/inf/Alternative living/ self - sufficiency/sugar -in food – preserving.aspx](http://www.assedu.co.uk/inf/Alternative%20living/self-sufficiency/sugar-in-food-preserving.aspx) (2017) that it is excess consumption of sugar that caused **obesity, diabetes, and heart disease**. Respondents on the question, has doughnut ever cause you any problem? Shows that 25.3% of the respondents had ever had health problems with doughnuts while 74.7% never had any problem with doughnuts. The respondents on the question has alcohol ever caused you any problem? shows that 25.3% of the respondents ever had health problems with alcohol while 74.7% never experience any problem with taking alcohol, however, other research studies show that drinking a lot of alcohol over a long time or too much of it on a single occasion can damage the heart, causing problems like: Cardiomyopathy – Stretching and drooping of heart muscle. Arrhythmias – Irregular heartbeat, stroke, high blood pressure, liver inflammations, alcoholic hepatitis, cirrhosis. Furthermore, some studies also indicate that alcohol causes the pancreas to produce toxic substances that can eventually lead to pancreatitis, a dangerous inflammation and swelling of the blood vessels in the pancreas that prevents proper digestion and cancer (source: National Cancer Institute(<https://www.cancer.gov/about-cancer/causes-prevention/risk/alcohol/alcohol-fact-sheet>): eating only bread might cause you to experience symptoms of nutrition deficiency such as tooth decay, slow wound healing, dry hair (Brian Syuki& Moses 2018). This indicates also that the amount of alcohol taking by the individuals matter.

International Food Information Council Foundation says, the chemicals used as preservatives are the ones that cause problems(International Journal of Pharmaceutical Sciences and Research March 2013 issue). , Eating small amounts of food additives may be safe, says the Cleveland Clinic. But if a person eats a lot of processed foods, he may increase the odds of becoming obese or being diagnosed with high blood pressure, heart disease or cancer. On the generalized question, has preserved food ever caused you any problem? 35.8% of the respondents agreed that they ever have problems with preserved foods, while 63.2% says they never ever experience any health problem with preserved foods, this also indicates that it is excess preservatives that cause negative effects on human health. The following research studies indicated that chocolate caused carcinogenic respiratory tract diseases. Bryan Myers (2019) vegetable oils caused Colorectal cancer . P.V. Rekha Devi (2006)Milkose caused tooth decay (<https://en.wikipedia.org/wiki/Candy> 2016) Butter caused heart diseases Atli Arnarson, (2019),grains stored in warehouse,

and rhumbu with treatment of pesticide to control pests caused. Disruption in the activity of organs in the body, eg kidney, liver blood or digestive tract (Orhii 2010).

Some of the harmful effects of preservatives such as sulfites, which are the common preservatives, come in the form of headache, allergies, cancer. Nitrous acid caused stomach cancer. Benzoates caused allergies, asthma and skin rashes as. Confirmed by (Moder Gustafson, 2003). BHA (butylated hydroxyanisole) is a solid used to preserve butter, lard and meat. Berkeley Wellness says this common ingredient is found in bags of chips, vegetable oils, cereal and cookies. Its role is to prevent food from becoming rancid. The National Toxicology Program says BHA is a human carcinogen.

RECOMMENDATION

The researchers recommend that preservative food be consume but moderately. That consumers should report any sight effect or symptoms observed as a result of consuming any preservative food. to the nearest health care.

CONCLUSION

The researched shows that preservative foods only affect human health, when taking in excessed. Because the research study indicates that only some of the respondents have experienced the negative health effect of preservatives foods, while others, they majority never ever had any problems with the preserved foods.

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