

Behavior of Second Year BS Food Technology Students Toward Sodium Intake

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Abstract

The primary objective of the study was to know the behavior of the respondents in sodium. The study also aims to know if the students are aware of sodium's role in the processes that occur within the human body and whether they consume sodium through other sources aside from salt. The researchers used the survey-questionnaire method for the gathering of data. Results shows that all of the respondents consume sodium in the form of salt every day .Salt is also their common source of sodium is usually added when cooking.

1 Introduction

The WHO recommends sodium intake of 2g/day as early as 2-15 years old. While for adults will be based on energy requirement. Electrolytes refers to, potassium, and chloride. They separated into positive and negative ions when put into a solution. The electrolytes are crucial in the body as they maintain water balance and are also involved in the acid-base balance as well. Sodium, in particular, is necessary for muscle contraction and nerve impulse transmission.

The major source of sodium is table salt, a compound composed of sodium and chloride. One teaspoon of table salt contains 2300mg or roughly 2g of sodium. Most processed food contains high amounts of sodium to the point that it can provide up to 75% of the daily recommended intake of sodium. Eating too much sodium can cause heart diseases, kidney diseases, and stroke. Sodium intake and risk of acquiring the aforementioned diseases are directly proportional. This means that the higher the sodium intake, the greater is the possibility of acquiring such diseases. Sodium is lost in the body as fluid mostly in the form of sweat and urine. The main way to cope up with this lost is to eat and drink food that contain sodium. According to US-FDA, 70% of the salt consumed by Americans come from processed food and restaurant food. Only a small amount came from home-cooked food. The 2015-2020 Dietary Guidelines for Americans recommend that Americans must consume less than 2300mg or 2.3g of sodium daily as part of a healthy eating plan. In addition to the sodium in salt, sodium is also found in msg or monosodium glutamate. MSG is used as a seasoning and a flavor enhancer.

Food processing is the method of producing food that is marketable and will contribute to the cause of the food industry. There are establishments and government agencies that hire food experts such as food technologists, food chemists, food microbiologists and nutritionists in order to improve this principle. Food processing seeks to make the quality of food better. Previous researches suggest that food processing has something to do with the sodium consumption of people since a lot of sodium is added to processed food to improve its taste and prolong its shelf life. It is hard to avoid consuming processed food nowadays since they are not that expensive, easy to find, has a wide variety and most important of all, convenient. However, with the advantages it offers there are still drawbacks. Processed food can increase the risk of getting diseases related to sodium intake such as the diseases mentioned previously. If frequently consumed or eaten in large quantities at a given period of time.

2 Methods

The researchers used the survey-questionnaire method. The respondents were the thirty (30) students of section BSFT 2A for academic year 2019-2020 under the BS Food Technology program of the College of Science of Bulacan State University.

3 Result

Table 1: Frequency of addition of salt to food

Option	Number of Respondents	Emergency
A. Never	3	16.67%
B. Barely	7	23.33%
C. Sometimes	10	33.33%
D. Often	5	16.67%
E. Always	3	10%
Total	30	100%

Out of the 30 respondents, 5 or 16.67% answered that they never add salt to food at the table. Seven (7) or 23.33% answered that they rarely add salt to food at the table. Ten (10) or 33.33% answered that they sometimes add salt to food at the table. Five (5) or 16.67% answered that they often add salt to food at the table. Three (3) or 10% answered that they always add food to the table.

Table 2: Addition of table salt while cooking

Opinion	Number of Respondents	Frequency
A. Never	0	0%
B. Barely	2	6.67%
C. Sometimes	5	16.67%
D. Often	13	43.33%
E. Always	10	33.33%
Total	30	100%

None of the respondents answered that they never add salt in cooking. Two or 6.67% answered that they rarely add salt in cooking. Five (5) or 16.67% answered that they sometimes add salt in cooking. Thirteen (13) or 43.33% answered that they often add salt in cooking. Ten (10) or 33.33% answered that they always add salt in cooking.

Table 3: Daily Consumption of Sodium

Option	No. of Respondents	Frequency
A. Far Too Much	0	0%
B. Too Much	7	23.33%
C. Just the Right Amount	18	60%
D. Too Little	3	10%
E. Far Too Little	1	3.33%
F. Don't Know	1	3.33%
G. Refused	0	0%
Total	30	100%

None of the respondents think that they consume far too much salt and none of them refused to answer the question. Seven (7) or 23.33% think that they consume too much salt. Eighteen (18) or 60% think that they consume just the right amount of salt. Three (3) or 10% think that they consume too little salt. One (1) or 3.33% answered that they consume far too little salt. One (1) does not know much salt they consume.

Table 4: Respondents answer to question if they think that a high salt diet could cause a serious health problem.

Option	Number of Respondents	Frequency
A. Yes	28	93.33 %
B. No	0	0%
C. Don't Know	2	6.67%
D. Refused	0	0%
Total	30	100%

Out of the 30 respondents, 28 or 93.33% answered yes, that a high salt diet could cause serious health problems. Two (2) or 6.67% do not know if a high salt diet could cause serious health problems. None of the respondents answered no and nobody refused to answer the question.

Table 5: List of health condition relating to too much sodium intake

Option	No. of Respondents	Frequency
A. High Blood Pressure	5	17.86%
B. Osteoporosis	0	0%
C. Stomach Cancer	0	0%
D. Kidney Stones	9	32.14%
E. None of the Above	0	0%
F. All of the Above	6	21.43%
G. Don't Know	8	28.57%
H. Refused	0	0%
Total	28	100%

Five (5) or 17.86% of the respondents indicated that High Blood Pressure can be the problem. None of the respondents indicated Osteoporosis and Stomach Cancer. Nine (9) or 32.14% indicated Kidney Stones can be the problem. Nobody answered "None of the Above". Six (6) or 21.43% indicated that "All of the Above" mentioned problems can be caused by a high salt diet. Eight (8) or 28.57% indicated that they "Don't Know" what sort of problem can be caused by a high salt diet. None of the respondents who said yes in the previous question refused to answer the follow up question.

Table 6: Respondent importance in lowering the salt/sodium in their diet

Option	No. of Respondent	Frequency
A. Not at All Important	0	0%
B. Somewhat Important	17	56.67%
C. Very Important	13	43.33%
Total	30	100%

None of the respondents said that it is not important to lower salt/sodium intake. Seventeen (17) or 56.67% said that it is somewhat important to lower salt/sodium intake. Thirteen (13) or 43.33% said that it is very important to lower salt/sodium intake.

Table 7: Respondents answer if they are on a regular basis in controlling their salt/sodium intake

Option	Number of Respondents	Frequency
A. Yes	16	53.33%
B. No (Skip to QX)	12	40%
C. Don't Know	1	3.33%
D. Refuse	1	3.33%
Total	30	100%

Out of the 30 respondents, 16 or 53.33% answered yes, they do something on a regular basis to control salt/sodium intake. Twelve (12) or 40% answered no. One (1) or 3.33% don't know if they are doing anything on a regular basis to control salt/sodium intake. One (1) or 3.33% refused to answer the question.

Table 8: Respondents Way in Controlling Sodium Intake

Option	No. of Respondents	Frequency
A. Avoid/Minimize processed food	8	50%
B. Look at salt/sodium labels on food	2	12.5%
C. Do not add salt at the table	4	25%
D. Buy low salt alternatives	0	0%
E. Buy low sodium alternatives	0	0%
F. Don't add salt when cooking	0	0%
G. Use other spices	2	12.5%
H. Avoid eating out	0	0%
I. Other (Specify)	0	0%
Total	16	100%

In the 16 respondents who answered yes in the previous question, 8 or 50% are avoiding/minimizing consumption of processed food. Two (2) or 12.5% look at salt and sodium labels on food. Four (4) or 25% do not add salt to the table. Two (2) or 12.5% use other spices in cooking. None of the respondents answered the other presented options

4 Analysis

Based on the data gathered, all of the respondents consume sodium in the form of salt every day since almost all food products contain salt. The amount of salt varies in amount for each type of product. The salt is usually added when cooking or is already present when consuming packaged and processed food. In addition to that, not all of the respondents are sure of what level is their current sodium/salt intake. Most of the respondents are aware of the possible effects of high amount of salt in the body and the diseases that an individual can acquire if the sodium/salt intake is high. The respondents know the importance of lowering the amount of salt/sodium consumed but not everyone is doing something to lower their salt/sodium consumption. This means that they know that sodium/salt intake must be lowered but not all are not exerting effort to lower their salt/sodium consumption. Others may be doing something to lower their sodium/salt intake but they are not doing it on a daily basis.

5 Discussion

The researchers conclude that teenagers and young adults are informed about sodium's significance in the body and why is it a necessity. The sources of sodium are well-known to this generation and people are have knowledge about the implications of a high level of salt/sodium consumption. Salt is the most common form of sodium that is consumed by teenagers and young adults most of which are taken through commercialized food such as processed food, and restaurant food and also home-cooked food. Lowering salt/sodium intake is important but it needs to be done with practices that will be observed consistently.

It is recommended for future researchers to elaborate this topic like preservatives and other chemicals added to food as they can add to the amount of sodium that a food item contains. It is recommended to explain topics like preservatives and other chemicals added to food as they can add to the amount of sodium that a food item contains. A 24hour food recall is also recommended to know the total amount the sodium intake of the respondents using the FNRI Food Composition Table.

6 Conflict of Interest

The author declares no conflict of interest.

References

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