

Savory snacks and chips in Romania: are salt load and daily intake arguments for a reformulation effort?

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Abstract

Savory snacks and chips are appreciated products on the modern market. Recent years brought to light the necessity to lower salt consumption. The question is if in Romania there is a real necessity of reformulation when it comes to snacks and chips

This research had in target to evaluate the salt concentration in savory snacks and chips produced in Romania and to evaluate their contribution to the daily salt intake of a Romanian. The highest level of salt was reported in salty biscuits, but with high differences between samples and producers. The average intake of savory snacks and chips in Romania was small, 3.58 g/person/day, giving 1% of the daily salt intake.

In conclusion, even if the snacks and chips intake in Romania is still low, due to the potential of growth of the consume in this area an effort in reformulating and lowering the salt content would be recommended.

Keywords: snacks, salt intake, chips, reformulation

1. Introduction

Savory snacks and chips are among the products with a growing trend of sales, even during the recent economic recession. Figures show that in the United States, for example, since 2007, total sales (in all channels) of salty snacks increased more than 15%. One reason for such strong sales is salty snacks, like pretzels and chips, offer greater value relative to many other snack options, such as cereal bars, nutrition bars, yogurt and fresh fruit.[1]

This is equally true in Romania, where fresh fruit or yoghurt are extremely expensive, even during summer, when normally prices should drop. Consequently, at every age group salty snacks and chips are affordable alternatives for snacking.

There are several separate segments in the big class of savory snacks and some of them are traditionally consumed in our country.

The segments, as classified by Mintel market research company [1] are: potato chips; tortilla chips; snack nuts and seeds (including corn nuts); popcorn; pretzels; extruded cheese snacks; corn snacks; and other. Tortilla chips are almost absent on our market, but the rest can be found in a large variety, the most consumed being “pufuleti” (extruded corn snacks), salty sticks and chips.

Research carried out in other European and North American countries showed that more than nine out of 10 adults report eating some type of salty snack on a regular basis (at least two times per month). Potato chips are the most popular salty snack, consumed by seven out of 10 respondents.[1] Respondents aged 18-24 have the highest usage rate among adults, at 95%. Usage of most types of salty snacks declines with age, dropping off around age 55, when kids are out of the house, and aging adults begin to focus on managing their health.

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In this frame, all the investigators of the global market reveal growing demand for healthier snack offerings. [2] More than seven out 10 women--who are typically the primary grocery shoppers for their families--say they are interested in healthier versions of salty snacks, such as baked and whole-grain snacks. Young adults aged 18-24 are also prime targets for better-for-you snacks: 75% of respondents aged 18-24 say they are interested in healthier versions of salty snacks.[1] Consumers are becoming more aware of how much sodium they are consuming. More than four in 10 respondents say their family’s diet is “too high in sodium,” an indicator that snack makers should focus on the sodium content. Though consumers are interested in healthier snacks, taste remains a barrier for many. Half of respondents agree that “lower fat and lower sodium versions of salty snacks do not taste as good as the original versions.” [1] In response to consumers’ demand for healthier snack foods, the biggest trends in new salty snack products include natural and organic, low- and no-sodium, whole-grain and baked/no-fat snacks, as well as portion-control packaging.

In the present research, we tried to see if a necessity to reformulate snacks on the Romanian market can be argued, in order to make them healthier, at least from the point of view of the salt content. It is not worthless to remember that the World Health Organization has set the target at 5 g/day for salt consumption [3] and recent dietary guidelines for the Americans set this limit at 6.6 g of salt per day (under a tea spoon).[4] The present study, part of a larger investigation targeting to evaluate salt consumption in Romania, analyzed the salt content of savory, salty snacks and chips, their intake and contribution to the daily intake of salt of a Romanian citizen.

2. Materials and methods

The study was included in the National Program of Monitoring the Health Determinants from the Life and Work Environment (the objective: protecting

health and preventing diseases associated with nutritional hazards), financed by funds from the Romanian Ministry of Health. It had two levels

- Evaluation, in 2010, of the salt content of savory snacks and chips produced in Romania and integrate the values with previous figures obtained by similar analysis carried out from 2008. An average number of five samples of “pufuleti”, salty crackers and chips were gathered from every Romanian county (total=486) and were analyzed by the laboratories of Local Public Health Authorities. Results were reported to the National Center for Environmental Hazards Monitoring from the Romanian National Institute of Public Health.
- Evaluation of the salt intake of Romanian citizens. The best method, taking in account the frame of the study, was judged to be the “food diary” evaluation. [5] Food diaries were gathered from a representative sample of Romanian adults. Intakes of different types of food were calculated and their contribution to the total salt intake was evaluated, using average values of salt content obtained from the analysis of salt measurements in food carried out the last 5 years in Romania.

3. Results and Discussion

The evaluation of the salt content of the samples led to the following results: (table 1) All the products were under the maximal salt content limit, as indicated in the brand’s standard.

Comparing with other evaluations carried out in previous years, it can be seen (figure 1) that the figures are similar, with the notable exception of chips, who seem to be more salty. In the detailed analysis of this aspect, it was noticed that the rise of the salt was due to just one brand of chips, who added unfortunately more salt than before, hindering the efforts of other producers in order to lower salt content of chips.

Table 1. Average salt content

County	“pufuleti”	chips	Salty biscuits and sticks
Alba	-	-	-
Arad	-	-	-
Arges	1.1	2.4	1.3
Bacau	0.75	1.25	2

Bihor	1.85	2.85	2.2
Bistrita Nasaud	1	-	-
Botosani	-	-	-
Braila	1.11	-	1.23
Brasov	-	1.84	-
Bucuresti	0.8	1.9	2
Buzau	0.96	1.9	2.13
Buzau	1.16	1.86	2.12
Calarasi	2.3	-	1.94
Caras severin	0.94	2.4	1.8
Cluj	1.55	1.8	1.88
Constanta	0.66	1.66	1.86
Covasna	0.84	1.4	1.4
Dambovita	0.2	1.75	1.82
Dolj	0.8	1.9	2.13
Galati	0.8	1.4	1.5
Giurgiu	1.17	2.06	1.31
Gorj	0.9	1.74	2
Harghita	1.4	4.84	2
Hunedoare	1	-	-
Ialomita	0.8	1.3	1.3
Iasi	1.4	1.2	2.2
Ilfov	2	5	3
Maramaures	1.3	1.96	1.8
Mehedinti	2.3	-	-
Mures	1.27	2.17	1.63
Neamt	0.62	1.56	2.11
Olt	0.95	2.6	1.8
Prahova	0.4	1.3	1.9
Salaj	1.6	2.3	-
Satu mare	2.1	2.34	1.52
Sibiu	1.13	1.3	1.1
Suceava	-	-	-
Teleorman	-	-	-
Timis	1.5	-	-
Tulcea	0.8	2.1	1.8
Valcea	2.4	2	2.7
Vaslui	0.9	1.64	1.93
total	42.47	63.62	57.55
average	1.2	2.1	1.8

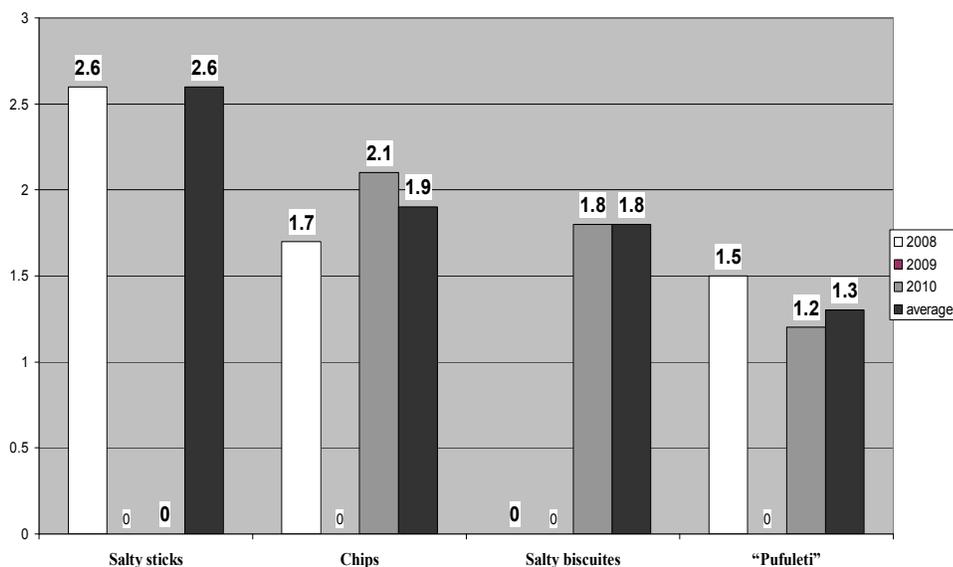


Figure 1. Salt content during the last years (average g/100g)

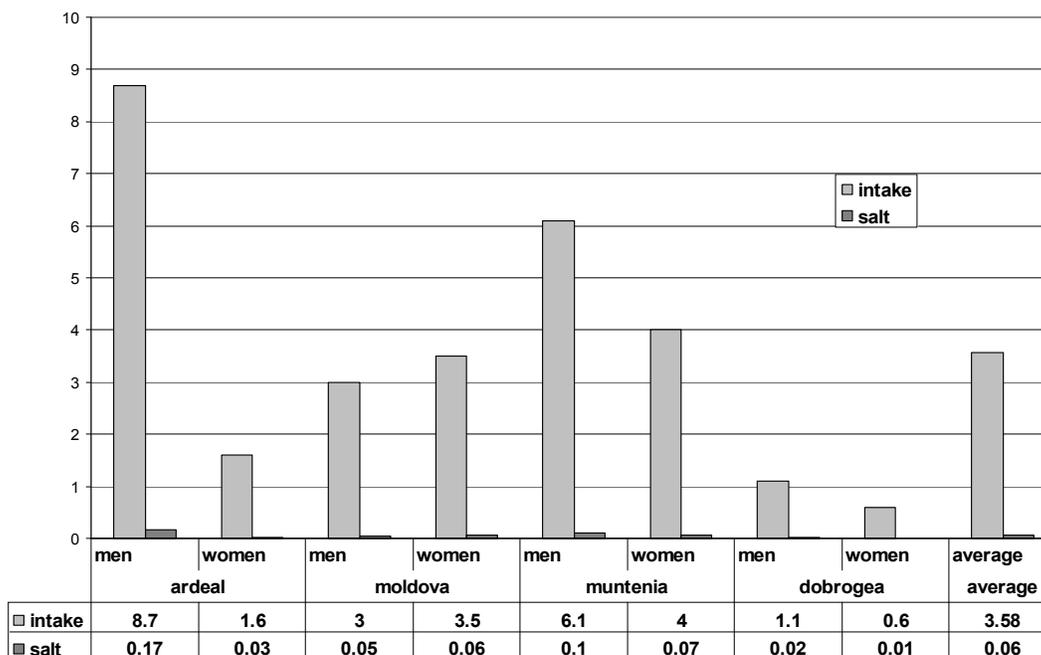


Figure 2. Snacks and salt from snacks intake, averages (g%)

The intake of savory snacks, evaluated after analyzing the weekly food diaries was small and only seldom these kinds of products were present in a Romanian's diet. However, great differences were reported, main factors of influence being gender and geographical area.

The average intake, calculated after introducing in the database all the figures received from all Romanian counties, is presented in figure 2. Only 3.6 g/day of snacks are consumed by an average adult person, contributing with 0.3 g of salt to the daily salt intake.

In terms of weekly consume, the average was under one serving/week and person, at a great distance from other European consumers, were the frequency of weekly servings is 4.8.[1] The small figures for Romania can be connected either with local traditions, which don't encourage snacking, or, at least partially, with the omission from the food diaries of snacking, though before completing them people have been instructed to write down everything consumed in or out of home. To the daily salt intake of 11.25 g, salty snacks contribute with only 1%.

The question that can be raised after these results is if the low consume is not an argument against an eventual effort paid by food industry in order to lower the salt content of snacks. However, in a theoretical exercise, if all the food stuff of an average day would be covered just by savory snacks and chips, it would result in a doubling of the real salt intake (2.26 times greater). So even if for the moment the seemingly low popularity of salty snacks is rather an argument against the reformulation, ascending European consumer's trends and high salt content can be, at least in future, enough arguments for lowering salt in snacks.

4. Conclusions:

- savory and salty snacks are not popular in Romania, their intake being lower than in other European and North American countries
- the salt content is rather high, but due to the low intake, snacks' contribution to the total salt intake in Romania is small

- efforts of reformulation have to be considered for the future, the lack of emergency of such a demarche giving time to Romanian food specialists to put in place viable salt lowering techniques, without the danger of obtaining products with lower organoleptic characteristics.

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