

Abstract

# Retrospective Study Investigating the Habits Related to the Snack Consumption in a Sample of the Greek Population <sup>†</sup>

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**Abstract: Background:** The modern lifestyle is often characterized by time pressure during the day. Busy lives and not enough time to cook lead to most people no longer cook a meal. A snack is generally defined as any food eaten between main meals. Since snacking has become a key part of modern eating behaviors, this study investigates the preferences and habits of adult consumers in Greece regarding the snacking consumption, which nowadays shows a growing trend. Snack foods are an established part of this trend. They have become an even more popular meal replacement for many people on the go. **Objective:** The purpose of this study was to evaluate the snacking consumption habits of Greek consumers. In addition, we aimed to record the adequacy of the knowledge about the nutritional status of snacks and whether the snack-products are pre-packaged to evaluate consumer preferences regarding nutritional claims or the nutrition table information. **Method:** In this retrospective observational study, an online questionnaire consisting of 44 questions targeting the opinions and habits of consumers was employed. Greek adults were reached via social media, messaging apps and email platforms. Habits and preferences of the Greek consumers were assessed through questions pertaining to consumption of snacks. It should be noted that the questionnaire was composed without modifying or assisting by any other existing questionnaire. The exclusion criterion of the survey was the age under 18 years. This survey employed a self-administered questionnaire and assessed by 12 questions regarding demographic information and somatometric characteristics, 21 questions regarding snacking preferences and 11 questions regarding snacking consumption habits. Data statistical processing carried out using IBM-SPSS Statistics 2010 program through control with paired samples correlations, crosstab and *t*-test. **Results:** In total, 1034 participants completed the survey. The majority (34.9%) age range was 35–44 years and 64.2% (*n* = 664) were female. The mean weight was 72.9 kg and the mean BMI of participants was 24.8 kg/m<sup>2</sup> (normal weight), while the final sample comprised 29.5% in overweight range and 11.4% with obesity. The 18.9% answered that their health was “not good”. Most respondents (over 98.5%) admitted “snacking” in regular base. Cereal bars was the most popular choice of snack consumption (66.7%) preferred because of limited time of respondents during the day. The 49.4% of the participants replaced with a snack at least 1–2 times a week one of the main meals. The 90.2% of participants believed that a snack consisting of chips was not nutritious at all, in contrast with 58.5% of them who believed that nuts were “Very Nutritious”. The 60.3% of participants preferred a tasty snack rather than a nutritious one. The 77.4% preferred nutrients derived from natural raw materials rather than a snack enriched with specific nutrients (e.g., yogurt fortified with vitamin D). The majority of participants (36.6%) was interested in “Energy” (calories) of the Nutrition Table of a pre-packaged snack and 45% of them were influenced by the external packaging. The three most popular categories of nutrition claims on a food product were “Fat/Saturated Fat”, “Energy Value” and “Sugar Content”. The most popular claim (66.7%) on a pre-packaged snack label, was the “No sugar/no added sugar”. The participants preferred that a new snack product 66.6% should have a savory taste. The 45% of participants believed that a food product with high nutritional value has the same taste compared to a product with low nutritional value. Olive oil was the raw material that a snack product should contain among the ingredients. The 37.8% of the participants followed

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habits of Mediterranean diet. Nutritional value is the most popular element (45%) followed by the price of the product (22.3%) in order a snack to be chosen. **Conclusions:** Greek adults prefer to consume a cheap, “grab ‘n’ go”, tasty, savory, snack with high nutritional value, with no added sugar, low in fat and calories and follow the habits of the Mediterranean diet. On the other hand, depending on the daytime, they also consume different types of snack regardless if they are healthy or not (e.g., chips at night). Due to time pressure some of them necessarily replace at least one main meal during the day. That’s why food industry should focus on developing enriched products (snacks) with nutritional ingredients from raw materials of the Mediterranean diet that promote nutritional claims in line with consumer demands.

**Keywords:** snacking habits; nutritional preferences; healthy food; snacking behaviour; snack frequency

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## References

1. Sijtsma, S.J.; Reinders, M.J.; Hiller, S.R.C.H.; Dolors Guàrdia, M. Fruit and snack consumption related to sweet, sour and salty taste preferences. *Br. Food J.* **2012**, *114*, 1032–1046.
2. Iazzi, A.; Vrontis, D.; Trio, O.; Melanthiou, Y. Consumer preference, satisfaction, and intentional behavior: Investigating consumer attitudes for branded or unbranded products. *J. Transnatl. Manag.* **2016**, *21*, 84–98.
3. Wouters, S.; Thewissen, V.; Duif, M.; Van Bree, R.; Lechner, L.; Jacobs, N. Habit strength and between-meal snacking in daily life: The moderating role of level of education. *Public Health Nutr.* **2018**, *21*, 2595–2605.
4. Jeżewska-Zychowicz, M.; Gawęcki, J.; Wadolowska, L.; Czarnocińska, J.; Galiński, G.; Kołajtis-Dołowy, A.; Roszkowski, W.; Wawrzyniak, A.; Przybyłowicz, K.; Stasiewicz, B.; et al. Dietary Habits and Nutrition Beliefs Questionnaire and the manual for developing of nutritional data. 2018.
5. Pires, C.; Agante, L. Encouraging children to eat more healthily: The influence of packaging. *J. Consum. Behav.* **2011**, *10*, 1472–0817.
6. Sharf, M.; Sela, R.; Zentner, G.; Shoob, H.; Shai, I.; Stein-Zamir, C. Figuring out food labels. Young adults’ understanding of nutritional information presented on food labels is inadequate. *Appetite* **2012**, *58*, 531–534. Erratum in: *Appetite* **2012**, *59*, 617. <https://doi.org/10.1016/j.appet.2011.12.010>.

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