

## ALIMENTOS

## ¿PUEDEN LOS JÓVENES EN LA ESCUELA TENTARSE DE COMPRAR REFRIGERIOS MÁS SALUDABLES CAMBIANDO LA DINÁMICA DE ELECCIÓN EN UNA CAFETERÍA?

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### *CAN YOUNG PEOPLE AT SCHOOL BE NUDGED TO BUY MORE HEALTHY SNACKS BY CHANGING THE CHOICE DYNAMICS IN A CASH CAFETERIA?*

*The paper draws on data presented at the IUNS 21<sup>st</sup> International Congress of Nutrition, that was held in Buenos Aires, October 15th- 20th, 2017.*

*It's won the Dr. Pedro Escudero award*

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#### RESUMEN

**Objetivos:** el objetivo del presente estudio fue examinar si al influir en la dinámica de elección de la comida y alterar la forma de cambiarla por una más saludable podrían aumentar las ventas de los refrigerios más nutritivos a los jóvenes que asisten a los comedores escolares de formación profesional.

**Materiales y métodos:** se diseñó una intervención de alimentación saludable para los jóvenes en los comedores de 13 escuelas vocacionales. Los estudiantes que asistieron eran principalmente varones de entre 16 y 19 años. Se les ofreció un paquete de refrigerios saludables que antes no se brindaba. La intervención se enfocó en el acceso a alimentos más sanos usando dos estrategias de cambio ambiental. Se incrementó la importancia del paquete de refrigerios saludables y los jóvenes fueron reexpuestos a la opción más beneficiosa para la salud en más lugares. Los datos de las ventas se recolectaron antes y después de la prueba por el personal de la cafetería según un protocolo acordado con los administradores de los comedores.

**Resultados:** los resultados mostraron que un número significativamente mayor de estudiantes eligió los refrigerios saludables, cuando se midió el seguimiento después de la intervención en comparación con la situación inicial. Las ventas de los refrigerios no saludables no cambiaron de manera significativa.

#### ABSTRACT

**Objectives:** the aim of this study was to examine if influencing food choice dynamics by slightly altering the choice architecture by relocating and re-exposing the healthy option could increase sales of healthy snacks among young people in vocational school canteens.

**Materials and methods:** a healthy eating intervention was developed for young people in canteens of 13 vocational schools. The subjects attending is mainly young men between 16 and 19 years of age. A healthy snack pack not previously offered was developed. The intervention targeted the access to healthy snacks using 2 environmental change strategies. Salience of the healthy snack pack was increased and customers were re-exposed to the healthy option more places. Sales data were collected pre/post test by canteen staff according to a protocol agreed with management canteens.

**Results:** the results showed that significantly more students chose the healthy snacks when measured follow up after the intervention compared to baseline before. Sales of the unhealthy snacks did not change significantly.

**Conclusiones:** si los estudiantes de las escuelas de formación profesional optan por dejar a un lado los refrigerios no saludables y los reemplazan por alternativas más sanas, es necesario tener en cuenta el aumento de la exposición a ese tipo de refrigerios y, a la vez, emprender acciones contra los alimentos menos nutritivos, por ejemplo, retirarlos o colocarlos en lugares poco visibles de la cafetería. Repensar la dinámica de elección en el diseño de los alimentos del autoservicio a través de pequeños cambios fáciles de implementar es un modo de adoptar conductas más saludables. Se requieren más investigaciones para explorar los efectos y las posibilidades de cambiar el modelo de selección de los alimentos.

**Palabras clave:** estudiantes, refrigerios saludables, dinámica de elección.

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**Conclusions:** if students at vocational schools are to opt out unhealthy snacks and replace them with healthy alternatives, consideration should be given both to increase the exposure of healthy snacks and simultaneously undertake similar actions in the unhealthy snacks, for example by removing them or placing them less visibly in the canteen. Rethinking choice dynamics in self service food lay-outs through easy to implement minor changes seems to be able to change uptake of healthy options. More research is needed to explore effects and potentials of changing food choice architectures.

**Key words:** students, healthy snacks, choice dynamic.

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## INTRODUCTION

Promoting healthier dietary habits young people is of prime societal concern. Traditional approaches to behavioral change rest on the assumption that information and education can facilitate such change. However, studies have shown that such approaches tends to benefit those already complying with official nutritional advice whereas the ones most in need tends to benefit less. As a result, there is an increasing interest in interventions targeting behavior through the environment. According to recent insights from dual process theory and behavioral psychology<sup>1,2,3,4</sup> changes in the environmental design – often referred to as choice architectures – holds the potential to influence the consumer to make healthier decisions. Unlike traditional restriction, the new nudging approaches are cheap and “soft” in terms of policy implying that they have attracted much attention.

Promotion of healthier eating has traditionally been relying on cognitive approaches. For instance the traditional KAB/KAP approach that assumes a sequence of knowledge, attitude, behavior/practice<sup>5,6,7</sup> can lead to behavioural change. A prominent example of such an approach is education and health promotional campaigns. The figure illustrates the traditional approach and new nudge approaches.

The aim of this study was to examine whether such an approach could influence food choice dynamics by slightly altering the choice architecture. We are interested in whether it increase the sales of healthy snacks among young people in a canteen at vocational schools.

## METHODOLOGY

A healthy eating intervention program was developed for young people at schools. Managers at cash cafeterias from 10 different vocational schools signed up for the program and agreed to comply with the intervention protocol and assist in collecting data. The customers attending this school type are primarily young men between 16 and 19 years of age and studies show that this group has a less healthy behavior than their counterparts in high school. A healthy snack pack that was not previously offered was developed as the intervention component. The intervention was built on two types of choice dynamic principles: relocation and re-exposure<sup>8,9</sup>. Thus the intervention increased the accessibility of the healthy snack pack enhancing visibility of snack packs was increased and by re-expose the healthy option to customers more places in the cafeteria. Data on sales volumes were collected by canteen staff at baseline and at the two follow ups.

## RESULTS

The results showed that significantly more students chose the healthy snacks when measured after the intervention compared to baseline before. Sales of the unhealthy snacks did not change significantly.

The table present the average sale of healthy and unhealthy snacks showing that there was a significant difference in the sale of healthy snacks, both in week 2 and 3. On average, they sold 4.2 more healthy snacks per. day of week 2 and average of the sales of healthy snacks sold per. day in week 3, was 4.5 times higher than in a normal week. The impact on the unhealthy snacks was insignificant.

Sales of snack. Average number sold per day	Week 1 "normal"	Week 2 "nudge 1"	Week 3 "nudge 2"
Healthy snacks	9.5	13.7*	14*
Unhealthy snacks	22.2	22.8#	21.2#

\*=0,05>, #=non-significant.

The table shows the total average number of sold healthy and unhealthy snacks, per day in week 1, 2 and 3.

**Tabla 1:** Snacks healthy and unhealthy.

## DISCUSSION

The results show that influencing the choice dynamics around the counter of a cash cafeteria can increase the sale of healthy options. This insight can be used by designers and professionals in the out of home eating sector for instance in school canteens. More studies however, are needed to increase the range of nudge components that cafeterias and canteens can apply and more research are needed to clarify the sustainability of nudge interventions.

## REFERENCES

1. Petty R, Cacioppo J. The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology* 1986; 19:123-181.
2. Thaler RH, Sunstein CR. *Nudge-Improving decisions about health, wealth and happiness*. Great Britain: Penguin Books, 2009.
3. Kahneman. *Thinking, Fast and Slow*. Macmillan Publishing 2011.
4. Mikkelsen BE. Chapter 8: "Nudging -a the third way to reinforcing healthy choices?" Chapter 8 in: *Challenges for health and healthcare - European perspectives*". Anders Petersen, Gunnar Scott Reinbacher & Betina Verwohlt (eds). Aalborg University Publishers 2016.
5. McGuire WJ. The nature of attitudes and attitude change. In: *Handbook of Social Psychology*, Lindzey & Aronson 1969; (Editors) 2° Edition, Vol. 3. Reading, Mass. Addison-Wesley.
6. Bettinghaus EP. Health promotion and the knowledge-attitude-behavior continuum. *Prev Med* 1986; 15 (5), pp. 475-91.
7. Fazio RH. Multiple processes by which attitudes guide behavior: The MODE model as an integrative framework. In: *Advances in experimental social psychology*. Edited by Zanna 1990; MP Vol. 23, pp. 75-109. New York: Academic Press.
8. Privitera GJ, Creary HE. Proximity and visibility of fruits and vegetables influence intake in a kitchen setting among college students. *Environment and Behavior* 2012; Vol 45, Issue 7, pp. 876-886.
9. Barends C, deVries J, Mojet J, Graaf C. Effects of repeated exposure to either vegetables or fruits on infant's vegetable and fruit acceptance at the beginning of weaning. *Food Quality and Preference* september 2013; Vol 29, Issue 2, pp 157-165.