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Zamorano

# Al servicio de las Américas y del mundo

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# Comparison of visual attention and purchase intention of traffic light and warning disc supplementary nutritional labels in the Zamorano University student population

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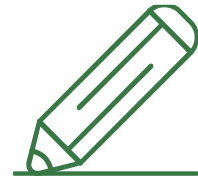
# Background

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- 39% of adults are overweight and 13% obese (WHO).
- 360 million adults are overweight or obese in Latin America and the Caribbean (Hruby & Hu, 2015)
- Non-communicable diseases such as coronary heart disease and type 2 diabetes.
- Lower quality of life and economic burden.

- Cause: poor quality diet.
  - Excess calories, sodium, sugars, and saturated fats (UNICEF et al., 2021).
- What to do about it?
  - Fiscal policy
  - Non-fiscal policy
- Nutritional labeling
  - Nutritional facts label
  - Supplemental nutritional information labels



## *Research objective*

*To evaluate the factors affecting purchase intention of processed and ultra-processed Food products, including supplementary nutritional information labels, knowledge, habits, use of nutritional information, and visual attention to supplementary dietary information labels.*

# Literature review

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- Understanding (nutritionists)
- Post-facto analyses
- Biometrics

- 90 participants from the student population at Zamorano University.
- 10 processed and ultra-process Food products
- Control + 2 treatments
  - No supplementary nutritional information labels
  - Hipotetical Traffic-light label (RTE INEN 022 (2R)) (2014)
  - Hipotetical Warning disc label (NOM-051) (2020)
- Questionnaire
  - Gender, nutritional knowledge, use of labels, healthy habits (consumption and exercise).
- Areas of interest
  - Brand, Price, serving size, expiration date, nutritional information label, ingredients, and supplementary information label.
  - Time to the first fixation, duration of the first fixation, fixation count, revisit count, time of permanence.
- ANOVA and Regression Analysis



# Findings

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- 63% men
- 16 – 28 years old
- 11 countries
- 78% some health and nutritional education
- 18% healthy habits (eating or exercise healthy habits)
- 56% (said) understand the nutritional facts labels
- 28% (said) use the nutritional facts label when deciding to purchase a food product
- 62% familiar with the traffic light label
- 46% familiar with warning discs
- Preference:
  - 61% Traffic light
  - 33% Warning discs
  - 6% none

Mejor consumir antes del

# Mini Pinguinos

L. 24.00



PASTELITO

FECHA DE CADUCIDAD: 15/06/22

CONT. NET. 200 g

## DECLARACIÓN NUTRIMENTAL

Contenido energético por envase:	772 kcal	(3 244 kJ)
Tamaño de Porción:	100 g	25 g (1 pieza)
Porciones por envase:	2	8
<b>Cantidad por Porción</b>		
<b>Contenido energético:</b>	<b>386 kcal (1 622 kJ)</b>	<b>97 kcal (406 kJ)</b>
Grasas Totales (Lípidos):	14,9 g	3,7 g
Grasas Saturadas:	5,6 g	1,4 g
Grasas Trans:	139 mg	35 mg
Grasas Monoinsaturadas:	6,6 g	1,7 g
Grasas Poliinsaturadas:	2,6 g	0,6 g
Colesterol:	43 mg	11 mg
Sodio:	311 mg	78 mg
Hidratos de carbono disponibles:	59 g	14,8 g
Azúcares:	48,2 g	12,1 g
Azúcares Añadidos:	46,8 g	11,7 g
Fibra dietética:	1,8 g	0,5 g
Proteínas:	4 g	1 g
	% VNR	(25 g)
Calcio	8%	

Porcentajes de Valores Nutrimientales de Referencia (%VNR) de acuerdo a la NOM-051-SCFI/SSA1-2010.

INGREDIENTES: AZÚCARES AÑADIDOS (AZÚCAR, JARABE DE MAÍZ DE ALTA FRUCTOSA, JARABE DE MAÍZ, GLUCOSA), GRASA VEGETAL, HUEVO, HARINA DE TRIGO (GLUTEN), COCCA, LECHE, GLICERINA, MONO Y DIGLICÉRIDOS, ALMIDÓN MODIFICADO, MALTODEXTRINA, ALGINATO DE SODIO, LECITINA DE SOYA, SAL YODADA, CARBONATO DE CALCIO, SORBATO POTÁSICO, SÓLIDOS DE LA LECHE, SABORIZANTE NATURAL Y ARTIFICIAL, PROPIONATO SÓDICO, ÁCIDO SORBICO, AGAR, ÉSTERES DE POLIGLICEROL DE ÁCIDOS GRASOS, GRENETINA, DIOXIDO DE TITANIO, GOMA XANTANA, GOMA DE ALGARROBO, GOMA GUAR, CARRAGENINA, MONOESTEARATO DE SORBITAN, POLISORBATO 60. CONTIENE: HUEVO, GLUTEN, LECHE Y SOYA. PUEDE CONTENER: NUEZ.

Mejor consumir antes del

Mejor consumir antes del

# Mini Pinguinos

L. 24.00



PASTELITO

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CONT. NET. 200 g

EXCESO CALORÍAS

EXCESO AZÚCARES

EXCESO GRASAS SATURADAS

SECRETARÍA DE SALUD

## DECLARACIÓN NUTRIMENTAL

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Mejor consumir antes del

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CONT. NET. 200 g

ALTO en AZÚCAR

MEDIO en GRASA

MEDIO en SAL

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# Findings: Visual attention

- With no supplementary nutritional information label

	TFFF AOI (ms)	First fixation duration (ms)	Revisit count
Brand	2796.36	174.44	1.47
Price	5583.9	202.76	1.43
Nutritional label	6738.59	165.23	1.71
Ingredients	11565.51	204.42	0.67
Expiration date	9397.83	251.69	0.52
Portion size	6969.94	215.15	0.97

# Findings: Visual attention

- With warning discs supplementary nutritional information label

	TTF AOI (ms)	First fixation duration (ms)	Revisit count
Brand	1743.52	165.77	2.04
Price	5402.64	222.56	1.07
Nutritional label	6069.35	173.92	1.84
Ingredients	12235.21	238.89	1.01
Expiration date	8321.51	294.63	0.71
Portion size	8901.7	244.39	0.71
Front labeling: warning discs	6193.91	182.54	0.98

# Findings: Visual attention

- With traffic light supplementary nutritional information label

	TFFF AOI (ms)	First fixation duration (ms)	Revisit count
Brand	1274.84	197.42	2.22
Price	4255.63	260.9	1.24
Nutritional label	6173.29	191.1	1.58
Ingredients	11243.29	199.59	0.79
Expiration date	7963.65	257.17	0.62
Portion size	8374.98	264.41	0.5
Front labeling: traffic light	4737.58	194.06	1.05

# Findings: ANOVA (Purchase intention)

Measures	Control		Warning		Traffic light		F	P	n
	M	SD	M	SD	M	SD			
Chorizo Parrillero	7.75	1.96	6.13	2.43	6.30	2.41	3.56	0.03	0.076
Jamon Virginia	6.80	2.55	6.63	2.40	6.50	2.30	0.12	0.89	0.003
Caribas	7.40	2.13	6.90	2.11	6.43	2.67	1.31	0.28	0.029
Coke	7.70	3.01	7.27	3.02	6.97	3.03	0.45	0.64	0.01
Doritos	6.30	2.60	6.50	2.32	6.55	2.21	0.08	0.92	0.002
Fanta naranja	7.27	2.33	6.30	2.25	7.07	2.12	1.57	0.22	0.035
Maruchan	6.50	2.73	5.60	2.99	5.30	2.86	1.43	0.24	0.032
Pingüinos	6.93	2.36	7.20	2.54	7.30	2.42	0.18	0.84	0.004
Tajadas	6.80	2.40	6.60	2.42	7.43	1.79	1.15	0.32	0.026
Zamodelfia	6.20	2.64	6.00	2.36	5.70	2.55	0.30	0.74	0.007

## Results regression analysis

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- Supplementary nutritional information labels do not predict purchase intention.
- For 9 of the 10 food products, gender was not a good predictor of purchase intention.
- Nutritional knowledge was not statistically significant in any of the products.
- In 3 of the 10 food products, familiarity with the supplementary nutritional information label was statistically significant.
- Healthy habits was not statistically significant for any of the food products.

# Conclusions

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- The presence of supplementary nutritional information labels did not significantly reduce the purchase intention of processed and ultra-processed food products.
- Other variables of interest, such as demographics and physical activity, are not good predictors of purchase intention of processed and ultra-processed food products.
- Participants did notice the supplementary nutritional information labels, but not before price and brand.
- Participants revisited more the traffic-light nutritional label than the warning discs.



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Thank you!  
Questions?

[www.zamorano.edu](http://www.zamorano.edu)

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