OPUS

Obesity-Related Policy, Systems, and Environmental Research in the US

Panel Discussions

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Food and Physical Activity Environments: Thinking Beyond Food Retail and Green Space

Angela Odoms-Young, PhD

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Moderator

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University of Texas at Austin, Department of Kinesiology and Health Education, College of Education

Lindsey Smith Taillie, PhD

University of North Carolina Gillings School of Global Public Health

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Environmental drivers of physical activity: a global perspective

Deborah Salvo, PhD

University of Texas at Austin, Department of Kinesiology and Health Education, College of Education

June 2024

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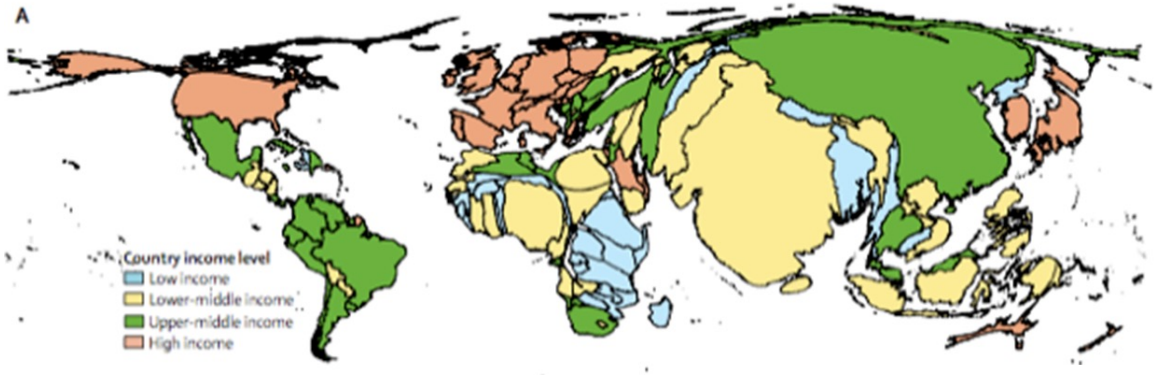
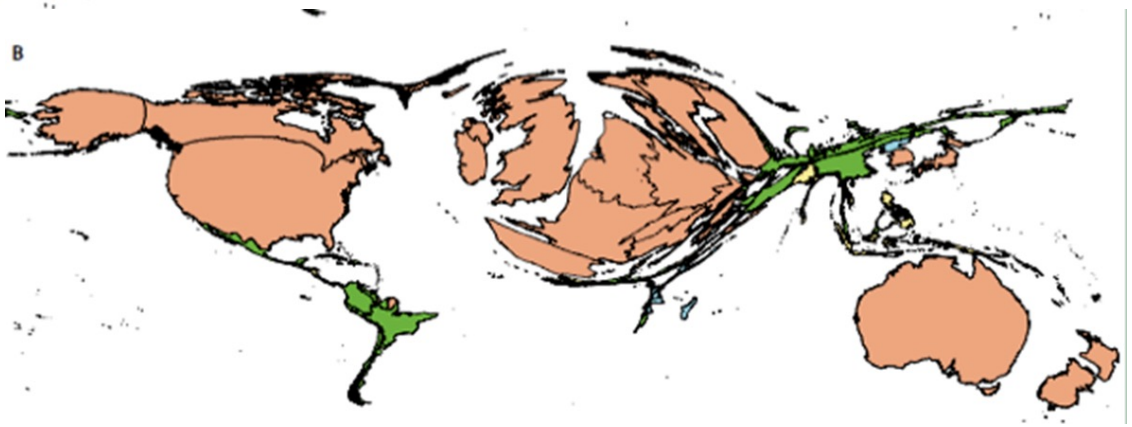
Research is lacking where its more needed!



Where people live…

Where physical activity intervention research takes place…



Pratt et al, BJSM (2010)

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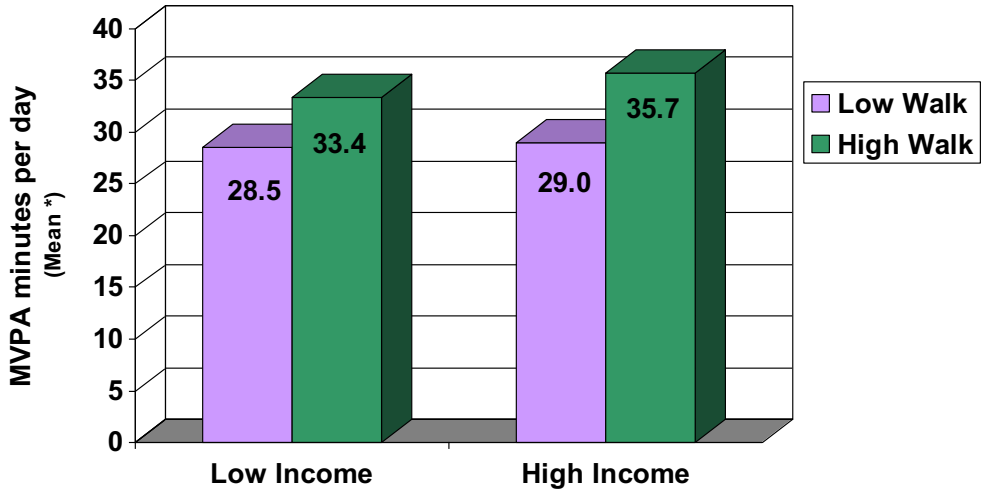
In the United States…

Walkability is a measure of how conducive a place is for walking

US Walkability Index =

[(z-intersection density) +
(z-net residential density) +
(z-retail-to-floor area ratio) +
(z-land use mix)]



NQLS - Accelerometer-based MVPA Min/day in Walkability-by-Income Quadrants

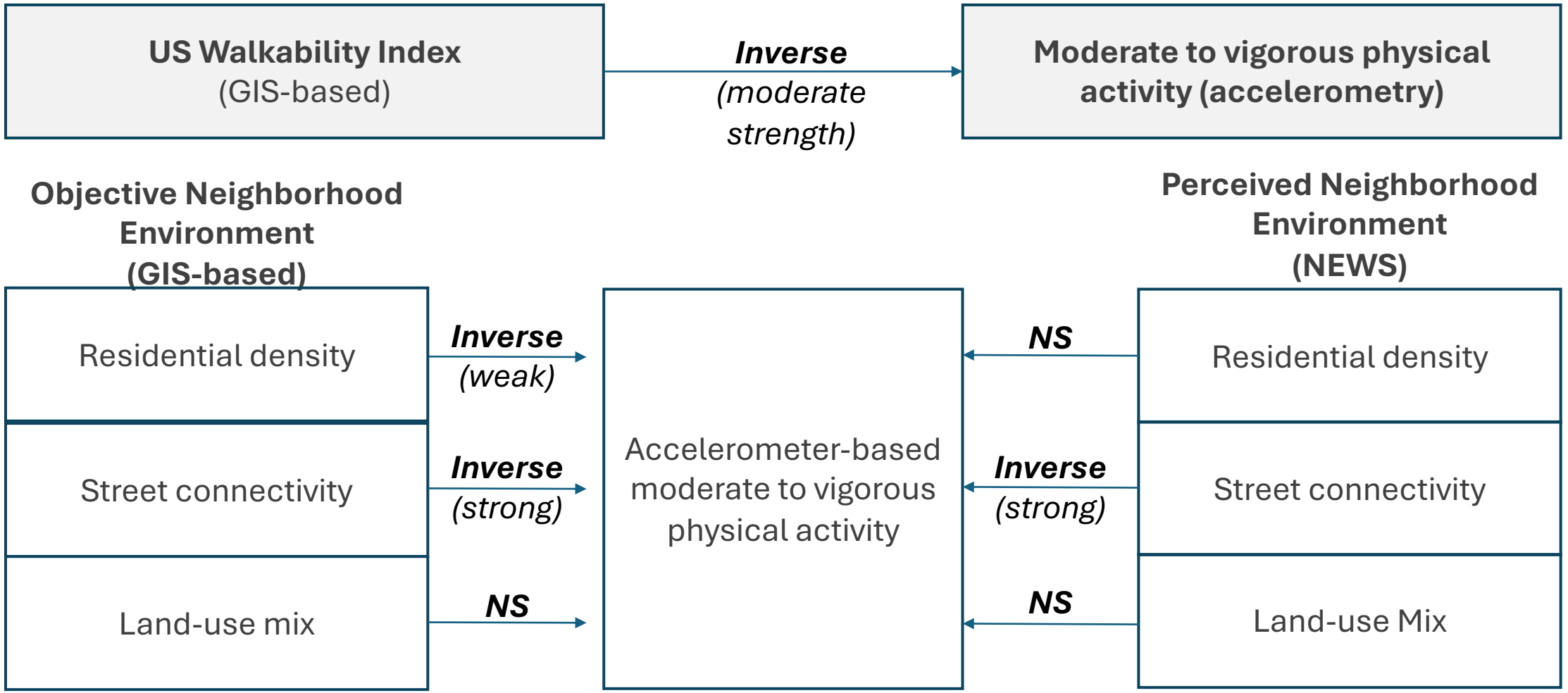
Frank et al, BJSM (2010)

Mismatch…

Outskirts of Atlanta

Outskirts of Mexico City

Context matters!



Salvo et al., PCD (2014); Jauregui et al., AJPM (2016)

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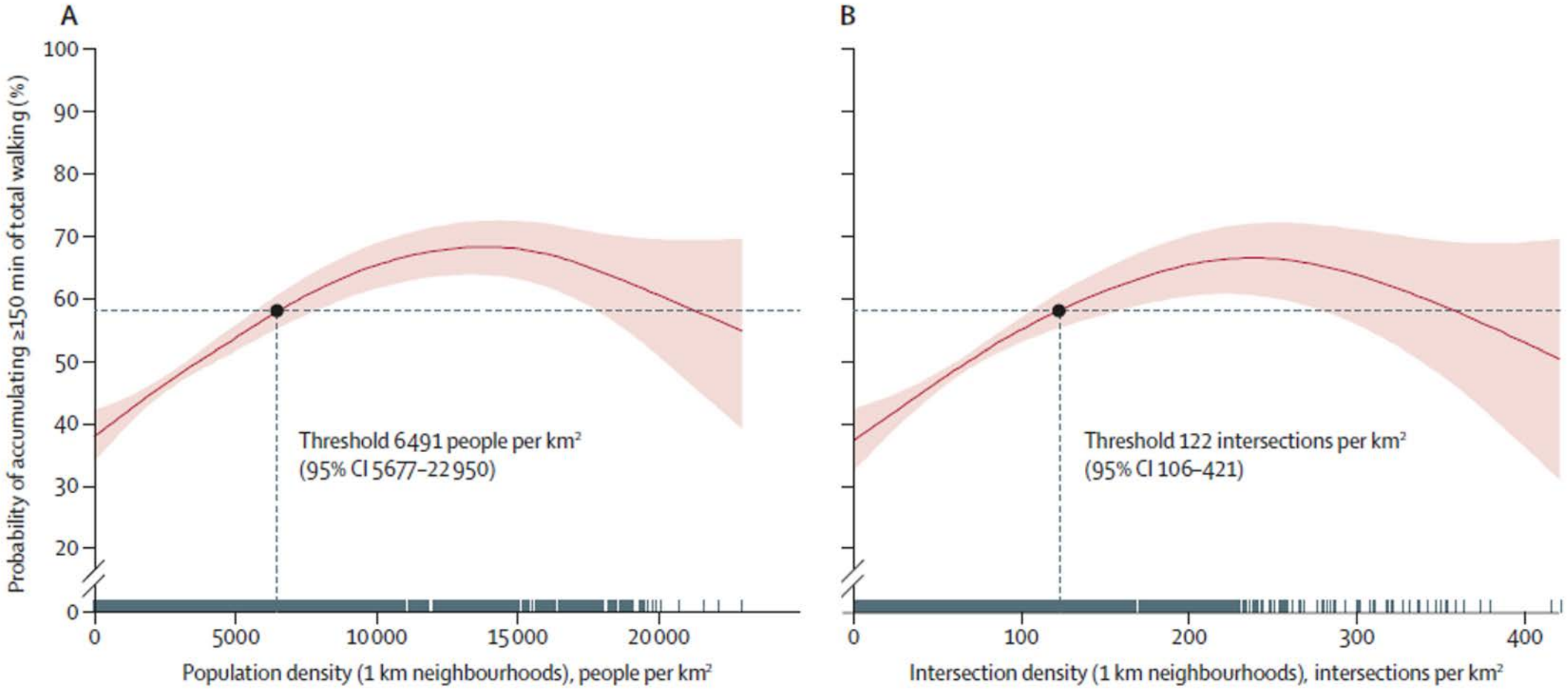
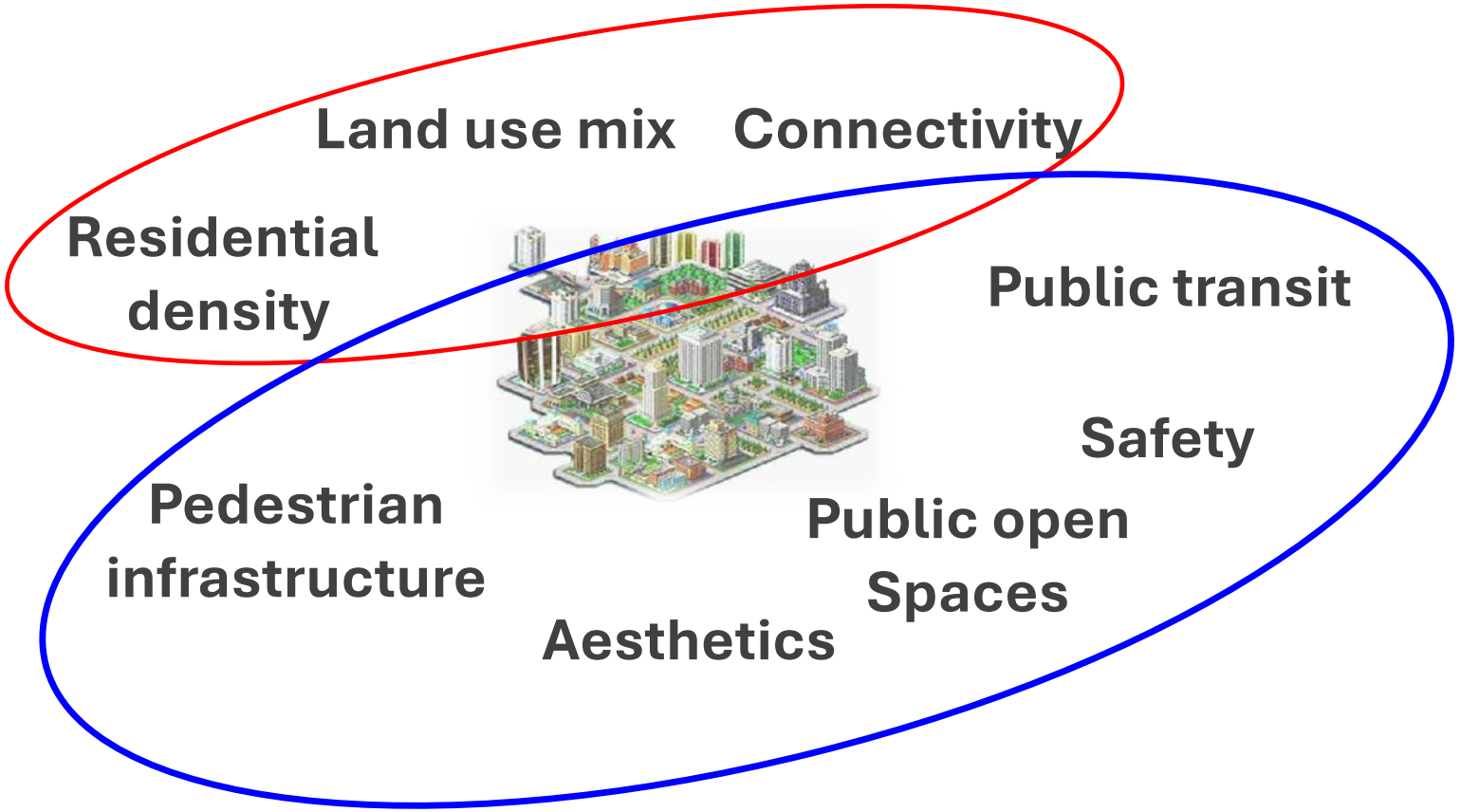


Relationships between urban design measures and the probability of ≥150 minutes of total walking per week. Dotted vertical lines show the thresholds associated with at least 58% probability of at least 150 min of total walking per week (dotted horizontal lines). Pink shading shows 95% CIs. A=population density. B=intersection density.

Re-defining walkability, and the driving forces behind physical activity patterns in LMICs



The role of public transit and car-free spaces for physical activity

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Is active living always a "healthy choice"?

The active choice is the easy choice

Being active is not a choice, rather, it is the only true option for many and occurs in sub-optimal, often unsafe conditions

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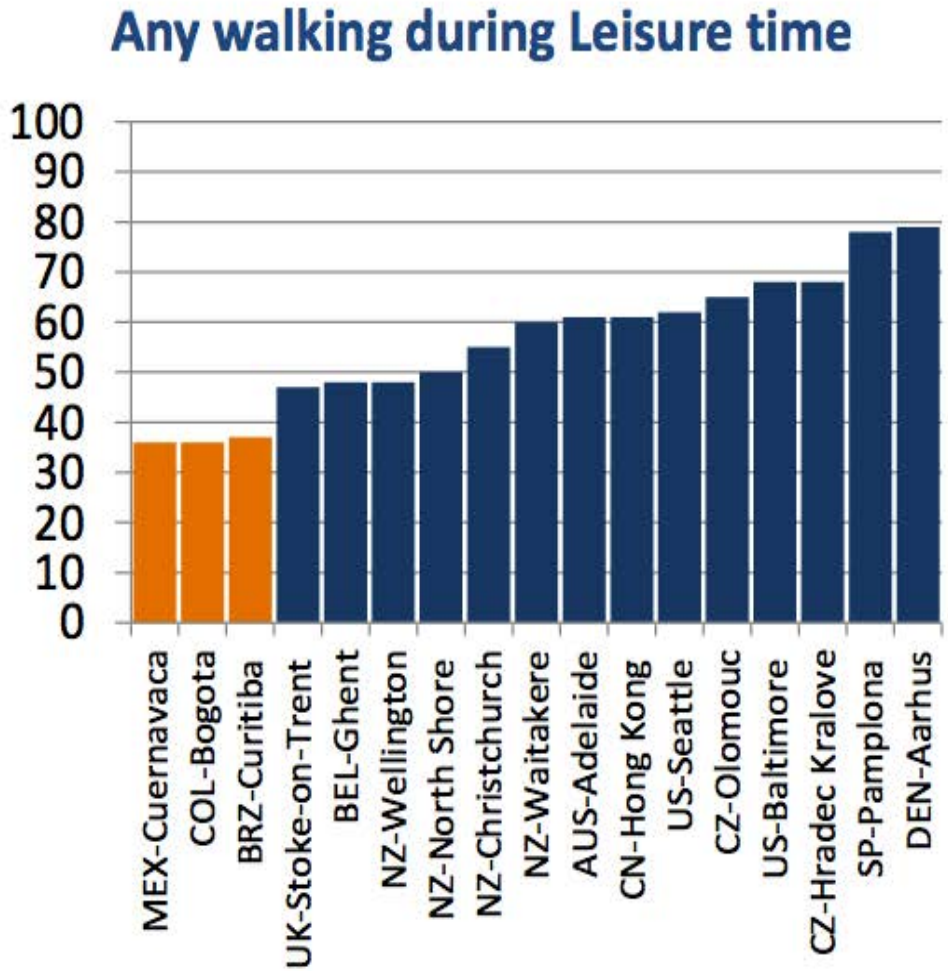
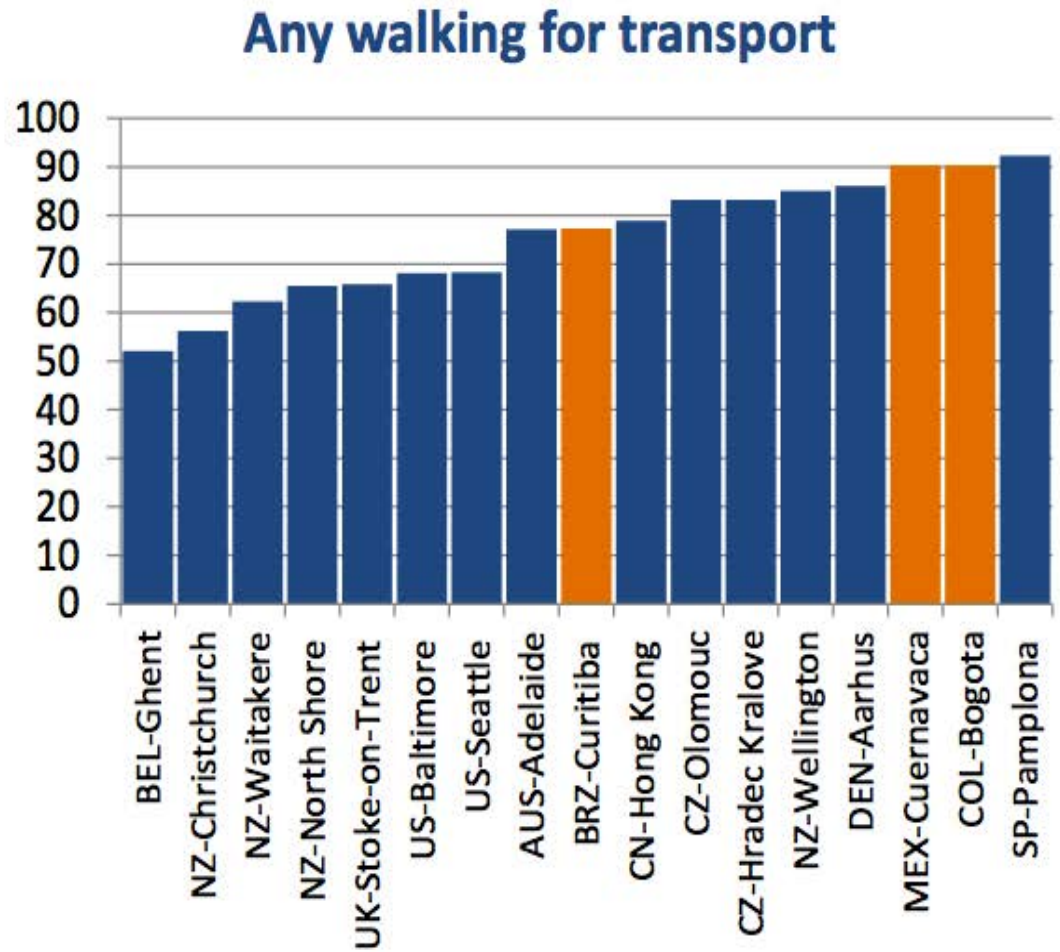
Considering the contribution of necessity vs. choice when examining population patterns of physical activity across settings…





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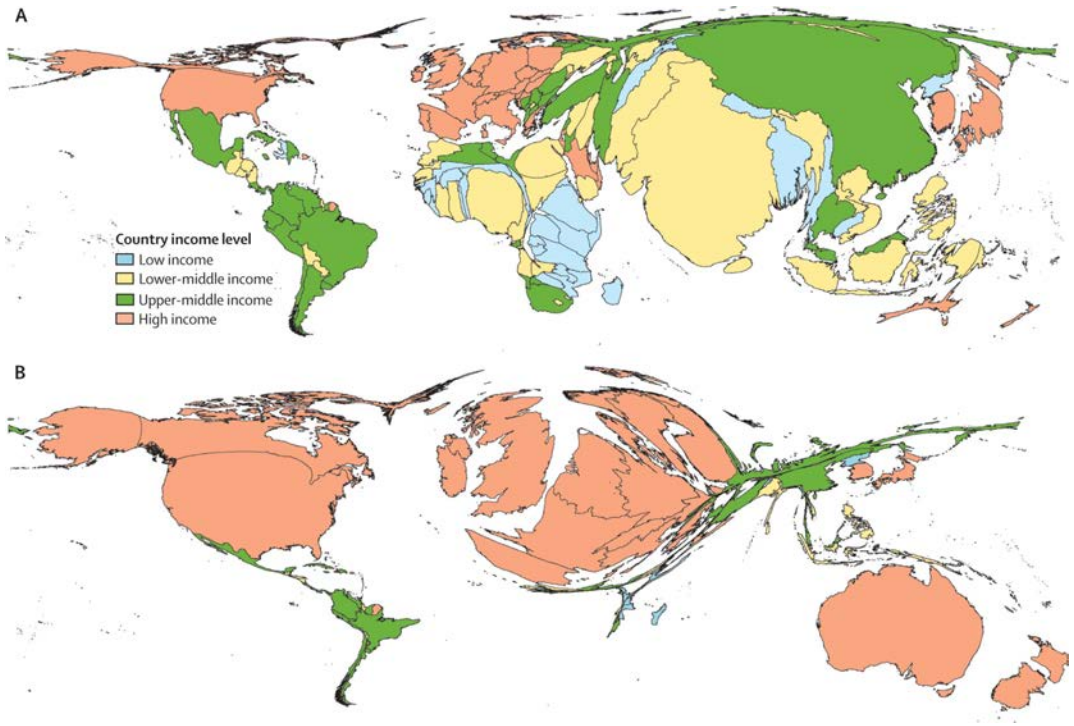
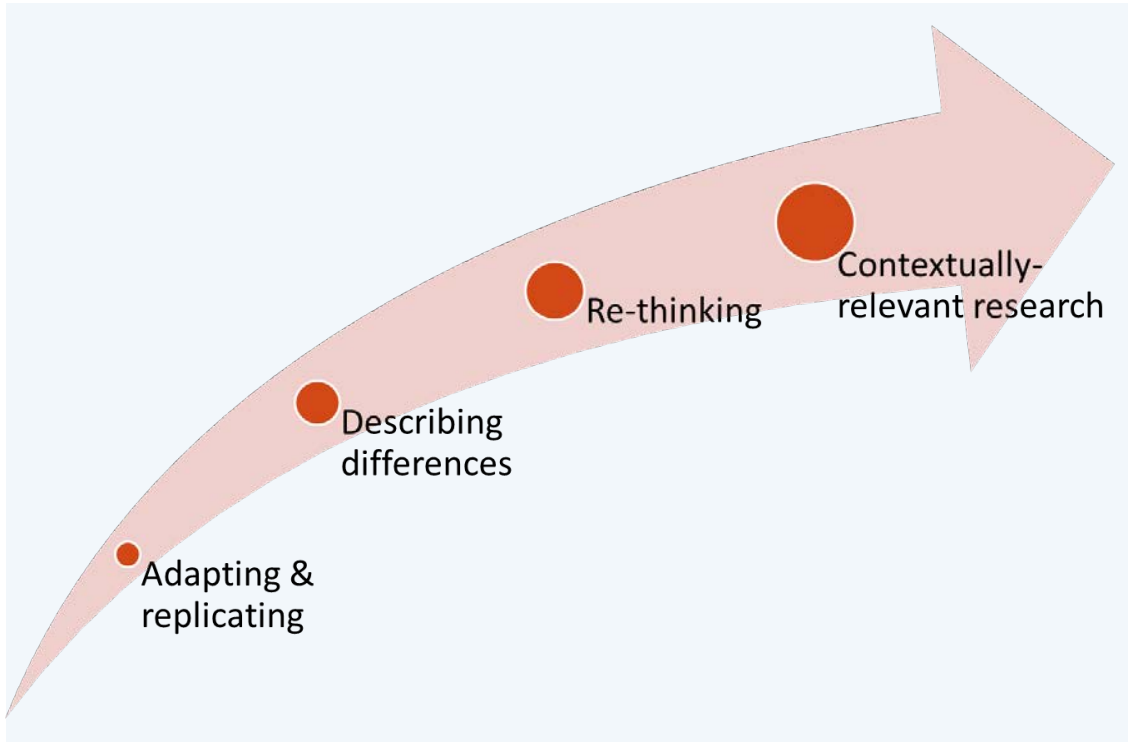
	Choice-based physical activity		Necessity-based physical activity	
	Discretionary-time Physical activity	Utilitarian physical activity		
Activity type	**Active leisure**	**Active transport by choice**	**Active transport by necessity**	**Active labor**
Activity examples	Exercise, sports, active play, dancing, leisure walking	Commuting to work or school by walking or cycling, walking to a nearby store or restaurant	Commuting to work or school by walking or cycling, walking to a nearby store or restaurant	Construction work, mining, agriculture, carpentry
Is a nonactive alternative a true option*?	Yes	Yes	No	No
Justification of choice- or necessity-based physical activity classification*	Discretionary time could be alternatively spent in sedentary activities Examples of alternative, sedentary activities: reading, watching television, playing video games, playing board games	Traveling by private car is a true alternative option* Car ownership can be afforded while meeting basic human needs (costs of food, housing and basic services) Active transport is chosen for some or all trips as it is facilitated by supportive environments and systems	No feasible alternative to active transport* Car ownership is not affordable without jeopardizing basic human needs (cost of food, housing and basic services) Active transport occurs regardless of whether environments and systems are supportive of it	Not many feasible alternatives to active labor are available for most people who engage in it Employment in jobs demanding physical labor is due to economic necessity and low access to education and training for higher skilled /professional jobs

*True choice-based physical activity is the result of an autonomous, noncoercive decision, in which other options are feasible for the person who ultimately decides to make the active choice. These alternatives are not truly feasible when necessity-based physical activity takes place.

Research centered on identifying, understanding, and resolving inequities in access to activity-promoting environments requires contextually-relevant approaches



Pratt et al., 2012



Towards equity-driven, contextually relevant global physical activity & public health research (Salvo, 2023)

¡Gracias!

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Lessons from international food policy

Lindsey Smith Taillie, PhD (she/her)

University of North Carolina Gillings School of Global Public Health

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Poor nutrition is a top risk factor for global diet-related non-communicable diseases

- 3 in 4 adults with diabetes live in low- and middle-income countries
- Rapid increases in sugary drinks and ultra-processed foods high in energy, added sugar, saturated fat, and sodium

Khan et al 2020, J Epidemiol Glob Health; International Diabetes Federation

A systemic food environment problem

Food prices

Child-directed marketing

Confusing food labeling

Institutions promoting unhealthy foods

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Food labeling

Marketing restrictions

Taxes/fiscal policy

Food policy done right: A case study

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Chilean Law of Food Labeling and Advertising

LABELING + MARKETING + SCHOOL FOOD

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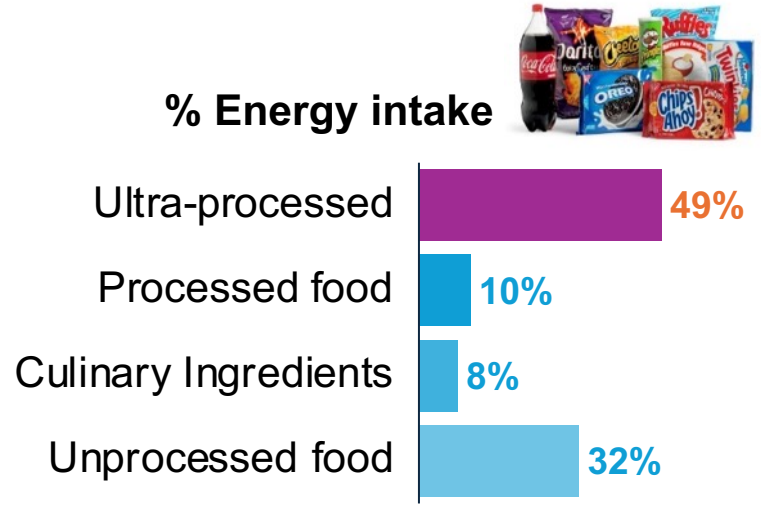
High prevalence of obesity and unhealthy diets

2016–2017

74% of adults over 15y had overweight or obesity

2018

51% of children 6–7y were overweight or obese



High intake of ultra-processed foods and sugary drinks

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Chile's policies

Ultra-processed foods & drinks high in added sugar, sodium, and saturated fat

1) Labeling

"High in" sugars, saturated fat, sodium, calories

2) Marketing

3) School

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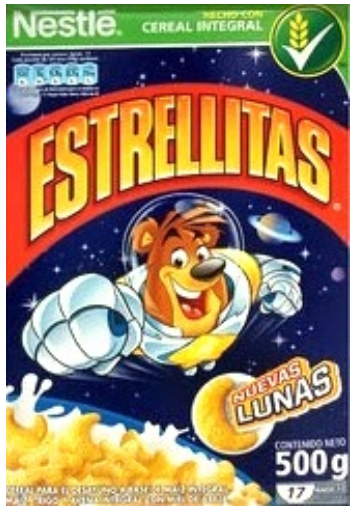
So what happened?

Food environment: Packages

Compliance: 95%

Decreases in Child-Directed Marketing



2015
43% of “high-in” cereals used child-directed marketing

2017
15% of “high-in” cereals used child-directed marketing

Mediano et al., 2019. *IJERPH*

Decreases in TV advertising for high-in foods

Kids' exposure to unhealthy TV food advertisements dropped by 44% to 58%.

Correa et al. 2020. *AJPH*; Dillman Carpentier 2019. *Public Health Nutr*

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Reductions in sugar and sodium

SUGAR

Beverages
Milks
Milk-based products
Breakfast cereals
Sweet baked products
Sweet spreads
Savory spreads

SALT

Savory spreads
Cheeses
Ready-to-eat meals
Sausages
Soups

-7% reduction in prevalence of unhealthy products

SATURATED FAT

Savory spreads

CALORIES

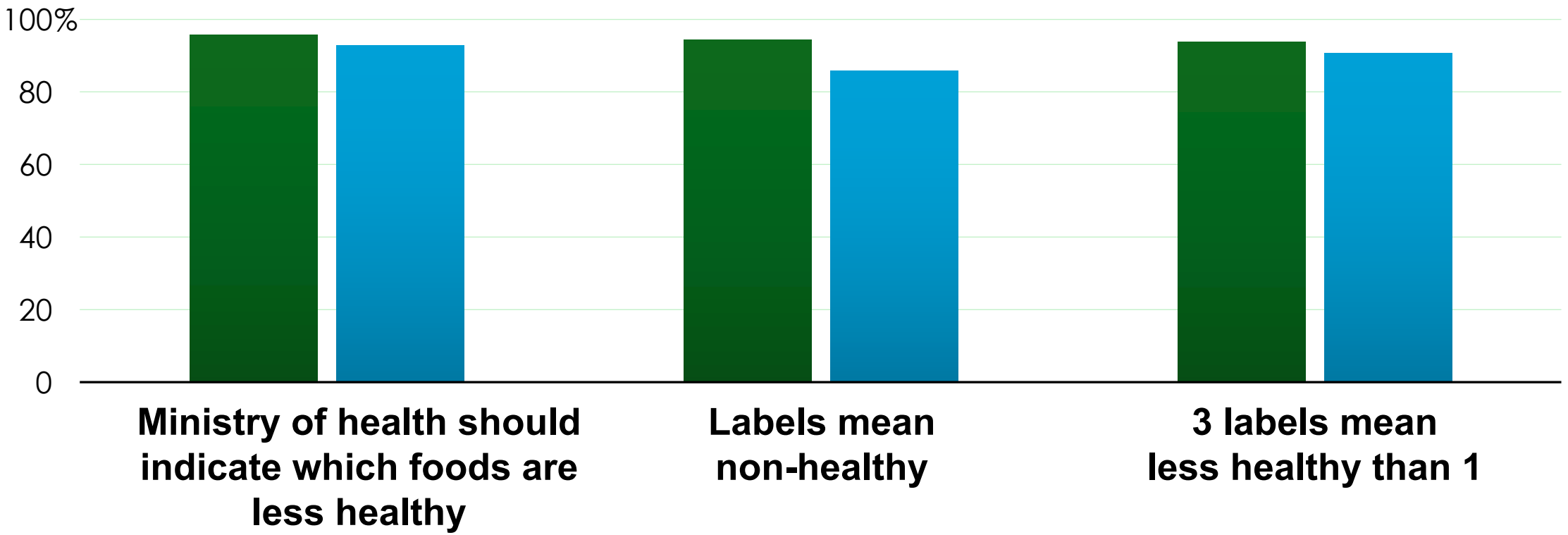
Breakfast cereals
Savory spreads

Most changes occurred around the regulation cutoff values.

Purchases of labeled products decreased

23% calories
37% sugar
22% sodium

People understand the warning labels



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People understand the warning labels

"These logos, they help you a lot. Because sometimes, there are things that you wouldn't even imagine that they had that much sugar.

One thing is knowing that it is sweet, and another one is knowing how much sugar it has."

"Because of this new law, my daughter has been taught a lot about these black logos.

"No mom, you can't buy me that, my teacher won't accept it because it has those labels."

And she requests salads, she won't accept snacks that have black labels."

Impact on the economy

No changes in employment or wages

EL CONSUMO DE *SNACKS* CRECIÓ 41,5% ENTRE 2010 Y 2015, SEGÚN CIFRAS DE EUROMONITOR:

Emprendimientos de comida sana, el mercado que surge con la Ley de Etiquetado de Alimentos

Colegios desesperados en búsqueda de productos envasados sin signo "Alto en" para poder vender en sus quioscos, productores mejorando recetas y respondiendo cerros de cotizaciones, son parte del *boom* que está generando entre los emprendedores de comida sana esta nueva regulación. • BERNARDITA AGUIRRE PASCAL

"Si hasta ahora vendo diez mil unidades al mes, para el próximo mes tengo cotizaciones para cien mil", explica el gerente general de Nita, Andrés Villagrán. Diez veces ha crecido la demanda de su empresa de *snacks* saludables que nació en Valdivia en 2013 para producir rodajas frescas de manzana envasada, galletones y jugos sin azúcar y que por estos días vive un *boom* por la nueva Ley de Etiquetado de Alimentos.

Trasladaron su planta de envasado de

Paraje et al. 2021 *Food Policy*

"Entrepreneurship of healthy food; the new market that emerges with the Food Labeling Law"

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What happened over time?

Correa 2022 *IJERPH*

> [I first see] the price, not the labels. Besides, [foods with] labels are clearly cheaper, less healthy, and healthier [food] is more expensive.
>
> And then you say, this one that is cheaper is hurting me, but this one is healthier and more expensive. So why don't you [government] help us instead of replenishing with so many labels.
>
> For example, one kilo of apples is $1200 pesos [US$1.5] and I buy some applesauce at $300 pesos [35 cents] but it has a lot of labeling.

FOCUS GROUPS OF MOMS IN 2021

What's next?

Fiscal policy: healthy food incentives

Pilot testing: Bolsillo Saludable (Healthy Food Incentive)

Fiscal policy: taxes

Colombia:

- Warning labels
- Taxing both sugary drinks and ultra processed foods
  - Up to ~20% by 2025
- Incorporating environmental concerns
  - Single-use plastics tax (~3%)

2023
6,000 pesos
$1.52

2025
7,188 pesos
$1.82

What did we learn?

Policies can drive dietary change...

…But we need comprehensive packages of policy action

Acknowledgements

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Contact me at: taillie@unc.edu

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Thank you!