

# Determinantes das escolhas alimentares

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Aula 6

Sexta, dia 1 de novembro 2019

# Suas apresentações e blogs

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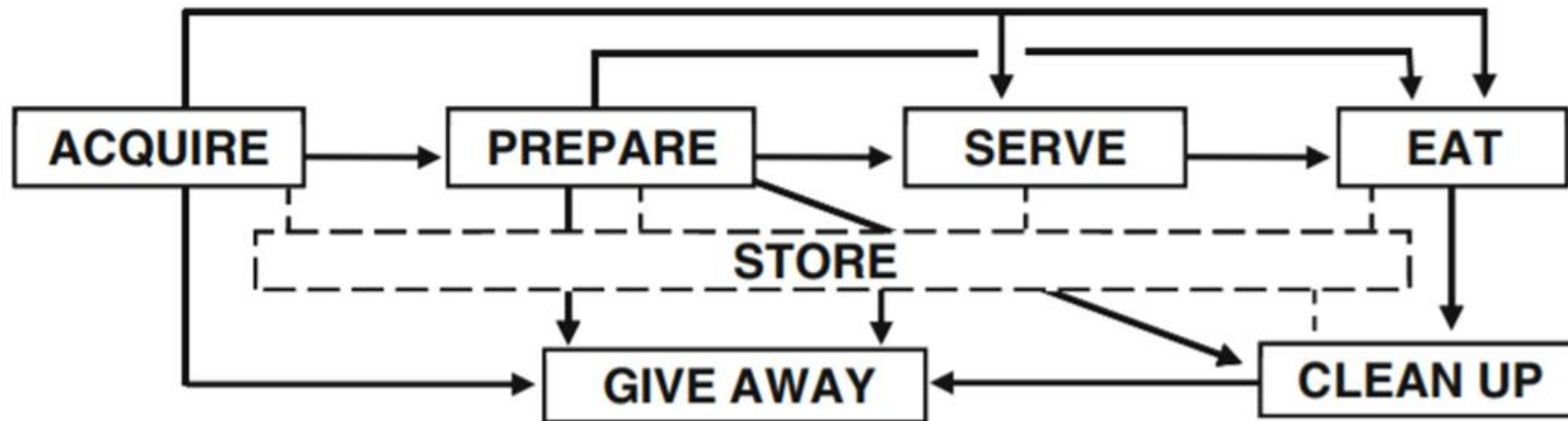
- Envie por e-mail a versão final do blog, antes das 17h de hoje!

# O que discutimos nesta aula?

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# Qual é a escolha da comida?

- Múltiplas **decisões** relacionadas com alimentos, > 220 decisões alimentares / dia
  - Quer comer, o que, onde, quando, quanto, com quem, quanto tempo
- Vários **comportamentos** relacionados a alimentos
  - Seleção, compra, preparação, consumo



**Fig. 1** Summary of types and sequences of food behaviors

# Influência da escolha de alimentos na saúde e doença

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Influência distal



Influência proximal

**Food  
selection**

**Food  
purchase**

**Food  
consumption**

**Influences  
biomarkers**

**Influences  
disease  
outcomes**

# Como você define os determinantes?

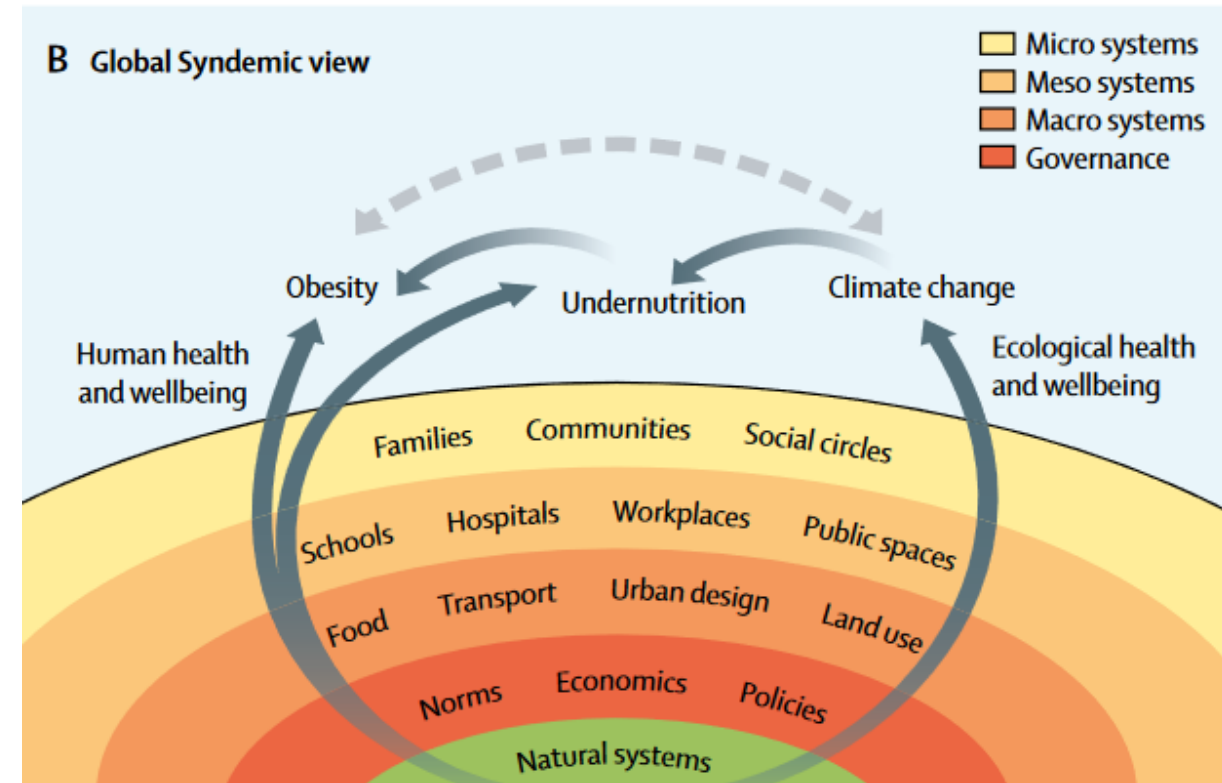
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- Causas, fatores, variáveis, canais que podem afetar a frequência de uma escolha / um comportamento em uma população específica
- Pode ser intrínseco ou extrínseco
  - Determinantes intrínsecos são características do indivíduo ou do alimento
  - Determinantes extrínsecos estão associados com influência ambiental no indivíduo ou no alimento

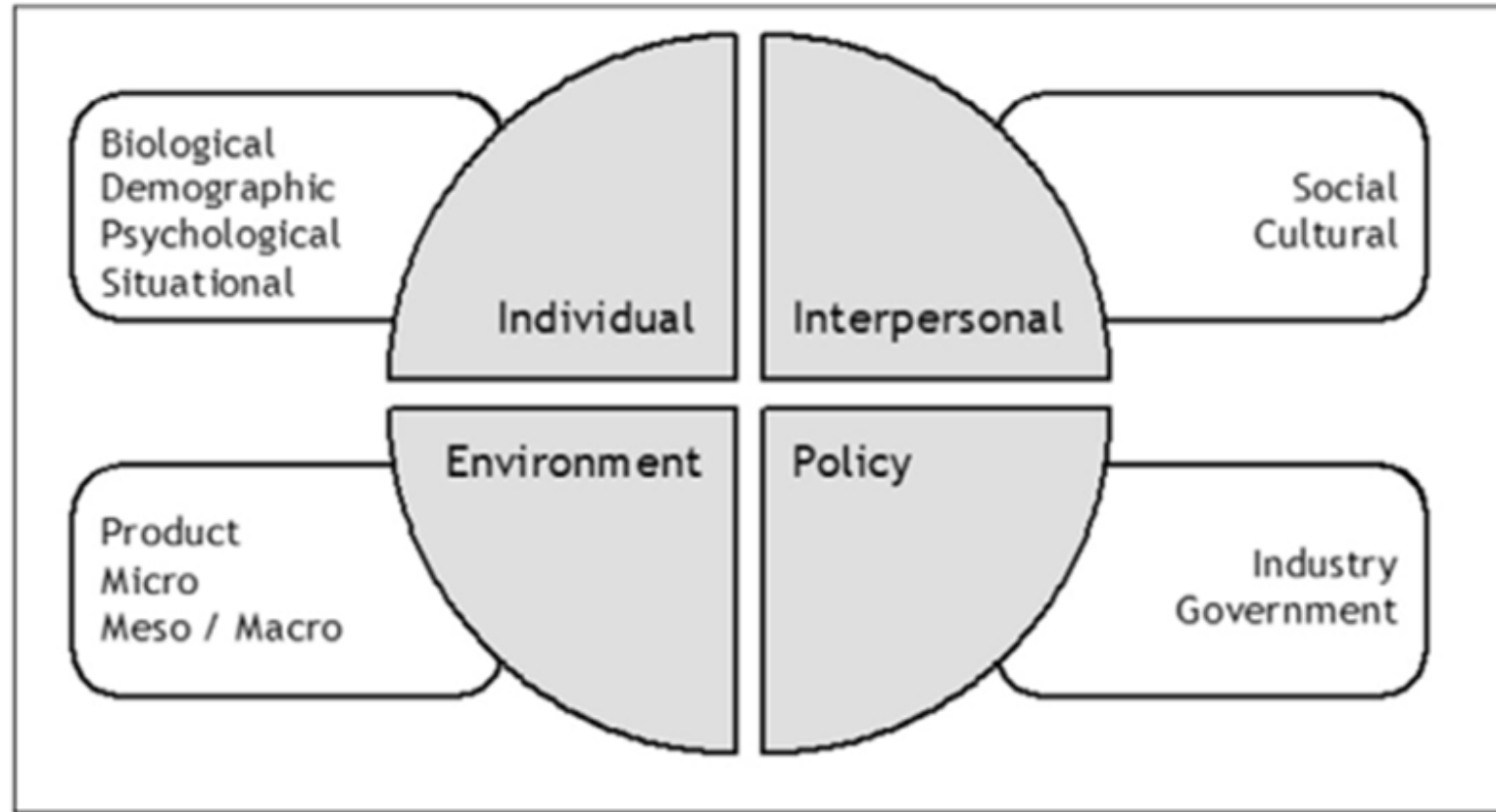
# Mudança para o novo paradigma



Figure 1. The Social Ecological Model.

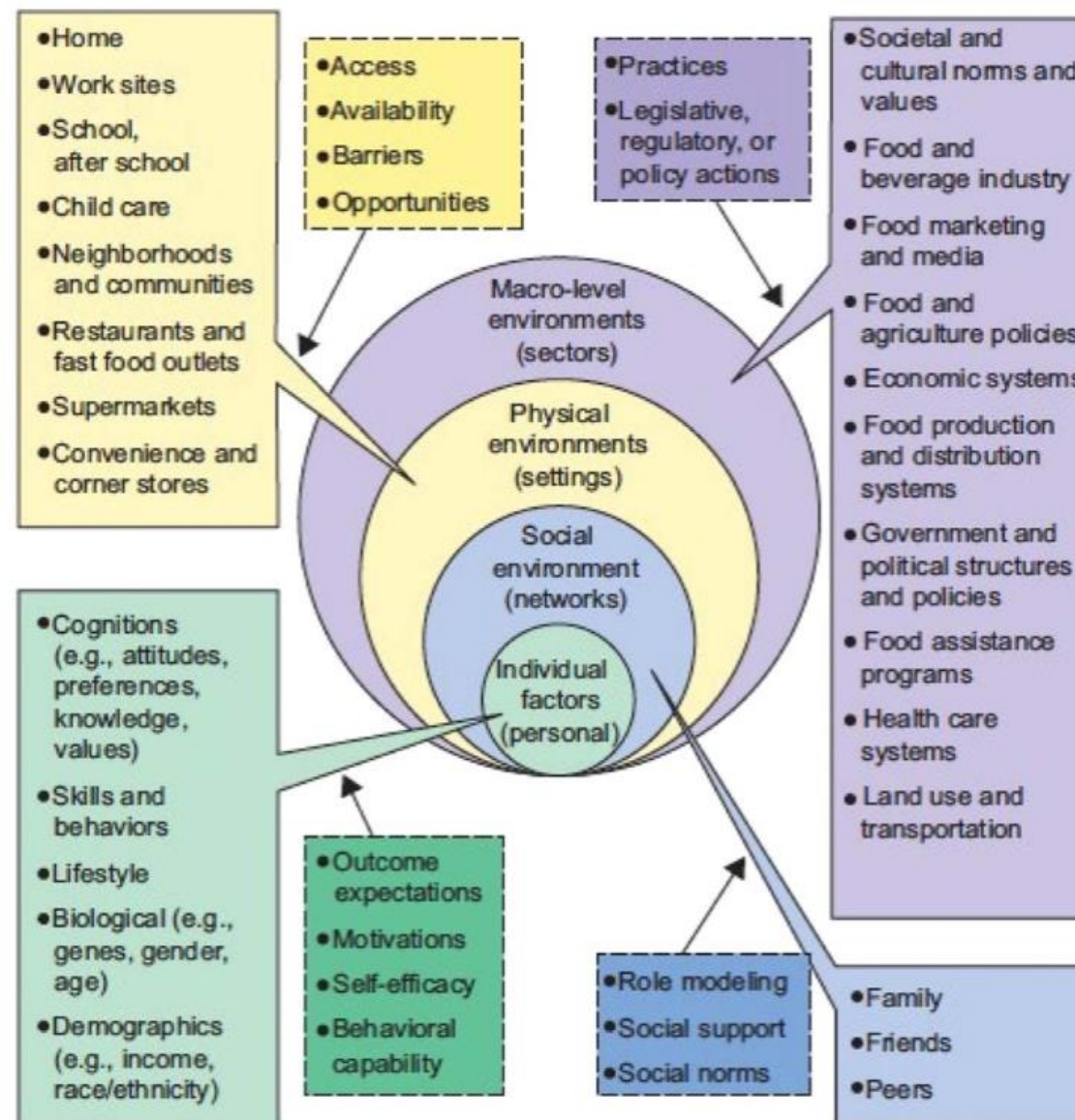


# O DONE framework



**Fig. 1.** Simplified representation of main levels (grey) and stem-categories (white) in the DONE framework.





**Figure 1** An ecological framework depicting multiple influences on what people eat. Reprinted from Story et al. *Annu Rev Public Health* 2008;29:253-272 (4), with permission from Annual Reviews. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

# Determinantes políticos da escolha de alimentos

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- Prioridades do governo
- Política agrícola e práticas de produção
- Acordos comerciais nacionais e internacionais
- Subsídios e incentivos da indústria de alimentos e bebidas
- Programas de assistência alimentar
- Estrutura governo-sociedade
- Sistemas de saúde
- Políticas de alimentação e nutrição
  - Redução de sódio
  - Redução de gordura trans
  - Rotulagem nutricional no Brasil

# Como a indústria de alimentos influencia a política?

- **Estabelece narrativas dominantes sobre os determinantes da saúde**
  - Propriedade dos meios de comunicação de massa
  - Obesidade, diabetes, doenças cardíacas são apontadas como decorrentes de escolhas e responsabilidades individuais ou sociais
  - Criam dúvidas sobre questões sobre as quais, na realidade, já existe consenso científico - legítima ou deslegítima certos discursos
  - A mídia social cria muitas oportunidades para influenciar normas e valores
- **Definindo as regras**
  - Eles capturam políticos eleitos que votam nos interesses de seus financiadores de elite
  - Usam conhecimento técnico e de pesquisa para definir padrões globais
- **Modificam conhecimento**
  - Recebem subsídios estatais para gerar sua propriedade intelectual
- **Direito político, econômico e social**
  - Reforço de valores e práticas sociais e políticas que permitem considerar apenas questões que são benéficas ou não prejudiciais à indústria de alimentos
  - Explorou a crise financeira global, reformulando-a como gasto excessivo em assistência social, justificando medidas de austeridade que atingem desproporcionalmente os mais vulneráveis

**Table 1 | Key government related food policy strategies to improve diet quality\***

Policy strategy	Examples	Strengths	Limitations	Uncertainties	Recommendations
Population education	National dietary guidelines. <sup>25</sup> Mass media “5 a day for better health” programme. <sup>26</sup> Population education components of the North Karelia project. <sup>27</sup> Use of cultural influencers. School curriculums focused on nutrition and culinary skills	Dietary guidelines can be promoted across the population <sup>28</sup> and be supported by rigorous and transparent reviews of evidence. <sup>29</sup> Dietary guidelines can directly influence government food service and assistance programmes. They are a “soft” policy with which industry is more comfortable and can indirectly promote industry reformulations	Mass media promotion of guidelines is costly, often with limited reach and sustainability. Large gaps exist between national dietary guidelines and actual public diets, indicating limited overall effectiveness. After decades of policy use, obesity and other chronic diseases continue to rise globally. Guidelines have smaller effects in marginalised subgroups	Optimal conditions in which population education can effect behaviour change, overall and in specific subgroups, remains unclear. Relative sustainability and cost effectiveness are uncertain especially compared with other environmental and systems based strategies	Can be helpful if accompanied by other measures, and if backed by government or semi-official bodies with influence. Cultural influencers (eg, celebrities, athletes, chefs) can help change social norms. Guidelines must be consistent with other official messages about food and health
Point-of-purchase labelling	Food package nutrition fact panels, <sup>30</sup> health claims. Restaurant calorie menu labelling. <sup>31 32</sup> Front-of-pack traffic light. <sup>33</sup> “Black box” warning labels in Chile	Such information can encourage industry to reformulate, especially for additives such as sodium, trans fat, and sugar. <sup>34</sup> Point-of-purchase strategies can be useful when consumers have knowledge or are more aware or motivated because of personal circumstances (eg, pregnancy, older age, with diabetes)	Evidence is mixed about effects on consumer behaviour, perhaps varying with nutrient or food targets. <sup>34</sup> Many approaches have not been rigorously studied or implemented and thoroughly evaluated. Confusion and controversy exist about optimal target nutrients/ metrics. Consumer attention at point of purchase is slight; distractions can be high. <sup>35</sup> <sup>36</sup> Official labels can be confused by product branding	Optimal dietary factors or standards to target are not well established (eg, many point-of-purchase approaches continue to include outdated targets such as total fat, total calories). Consumer attention and awareness may not translate to behaviour. Disparities might be exacerbated because of smaller effects on disadvantaged groups	These should be promoted because they are within the “consumer market” model. Promising options include front-of-pack (eg, UK, New Zealand), warning labels (eg, Chile, New York City’s sodium menu label, California’s proposed warning label on sugar sweetened beverages). For most such actions, relative healthfulness of different foods must be appropriately classified, perhaps using systems that combine food category classifications with multilevel nutrient criteria <sup>37 38</sup>



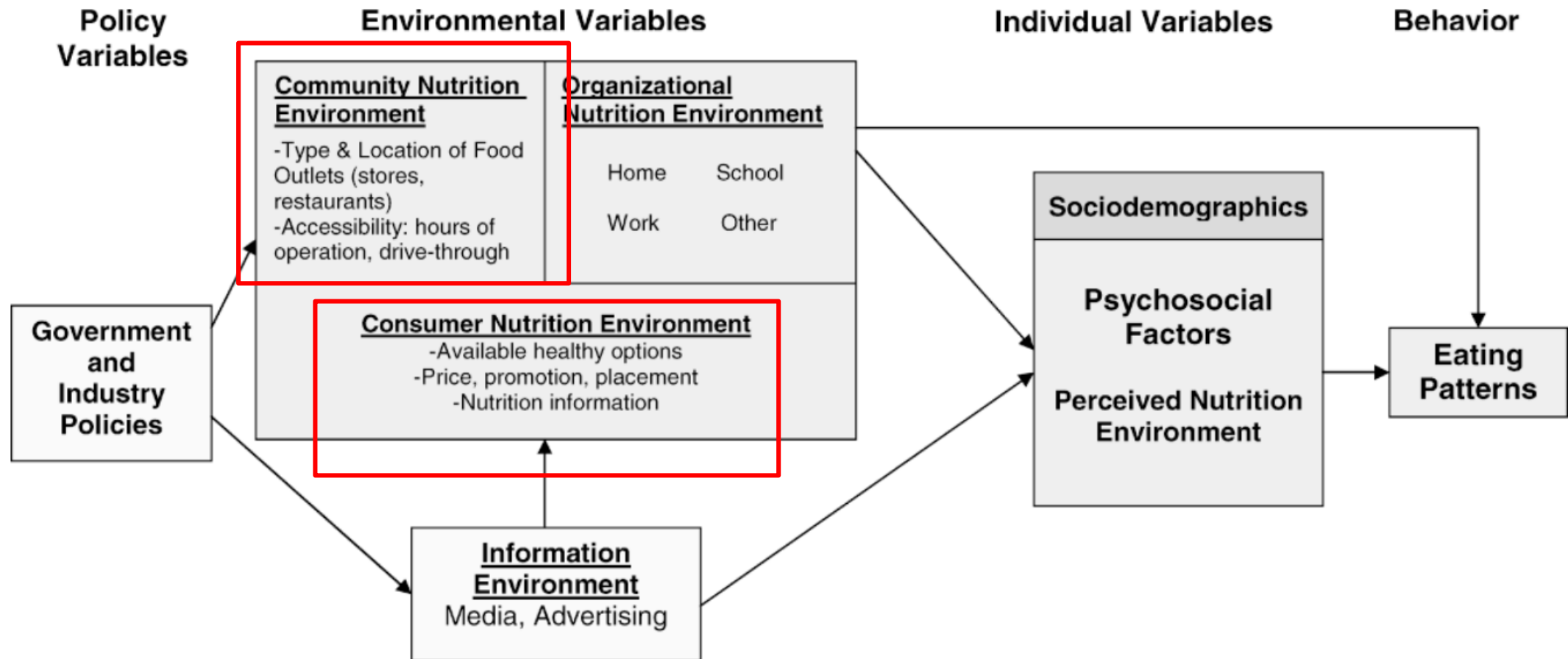
Fiscal incentives and disincentives	National soda and junk food taxes. <sup>38-40</sup> Subsidies for fruits and vegetables in national food assistance programmes. <sup>41</sup> <sup>42</sup> Agricultural incentives for berry production <sup>27</sup>	Price has a strong influence on food choice. Such effects may also be stronger in low income groups, helping to reduce nutrition and health disparities. Publicity around price incentives and disincentives can bring about additional changes in attitudes and intake.	Consumption change in some foods may have unpredictable effects on overall dietary quality, depending on substitutes. Relatively large price differences may be needed to be effective and strong government support. Taxes and other financial disincentives often create strong opposition and lobbying by industry	How important are additional indirect effects on substitutes and complements (other foods)?	Fiscal incentives are effective and should be used by governments. This market based approach helps bring the price of foods closer to their true societal cost, including direct and indirect costs on health (and potentially the environment). Disincentives should be paired with incentives to reduce financial regressivity, maximise health benefits, and help reduce industry opposition
Food assistance programmes	Income based or other conditional food vouchers or cash transfers, <sup>43</sup> school meals, supplementation programmes	These improve purchasing power and access of low income groups, helping to tackle disparities. They use existing systems for improving nutrition, and align poverty reduction with health promotion and healthcare programmes <sup>44</sup>	These often have limited guidelines or standards around diet quality and health. Governments may consider them costly welfare programmes; short and long term benefits on health, healthcare costs, and productivity are often not estimated	The appropriate balance between participant choice and health promotion is unclear	All government food assistance programmes should have mechanisms, standards, and incentives for healthful, nutritious, and culturally appropriate choices, and also align with health promotion and healthcare programming
Procurement nutrition standards	Nutrition standards for food purchases for government offices, public schools, the military, food assistance programmes, and other government funded organisations	Governments are often large employers and food purchasers in their region. They are low cost and sustainable. In cases of high coverage food assistance programmes, nutrition standards may improve diets in large proportions of the population, including disadvantaged groups	Whereas setting standards is low cost, following them may substantially increase food purchasing costs where government budgets are limited.	Effects on diets are unclear eg, compensatory dietary changes may occur outside the organisation. Optimal dietary factors or standards to target are not well established, especially for packaged foods	Nutrition standards should guide all food purchases for government offices, public schools, the military, food assistance programmes, and other government funded organisations. National food assistance programmes can be used for diet quality and nutrition

**Table 1 | Key government related food policy strategies to improve diet quality\***

Policy strategy	Examples	Strengths	Limitations	Uncertainties	Recommendations
Research and innovation	Basic science, medical, and applied (including policy) nutrition research. Research and development incentives for agricultural producers and food manufacturers	Recognises that today's challenges often require tomorrow's solutions. Can promote and use industry innovation and economic success, eg, through tax breaks and government approval. Return on investment is often high	Is viewed as costly by some policy makers. Length of time to see benefits is uncertain	Recognition of benefits by policy makers and feasibility in era of constrained budgets. How to identify and minimise conflicts of interest for public-private partnerships (see box 2)	Government should substantially increase and sustain funding for research on food, nutrition, health, and policy implementation and evaluation is needed. Public-private partnerships (eg, research and development incentives) to promote development and marketing of healthier products are needed
Coordination of actions across ministries, agencies, and at local, national, and international levels	Coordination of school, after school, and early child care meal standards with national dietary guidelines. <sup>49</sup> Integration of food assistance programmes with healthcare for the poor. Public school lunch and breakfast programmes to improve military readiness and national security. <sup>74</sup> Agricultural and trade policy linked to nutrition and health. <sup>75-77</sup> Setting of nutrition guidelines, policy actions, and country goals by global economic and political institutions such as the World Bank, United Nations, and World Trade Organisation	A "nutrition and health in all" approach could greatly improve food systems and health outcomes, with large benefits on productivity, equity, and health costs. Uses and adapts existing government structures and systems	Expertise to combine and stage policy approaches is often limited. Jurisdiction for different aspects of policies may be divided across government sectors, who may also share unequally the costs and benefits. Factors driving policy for some outcomes (e., employment, business profits) may differ from those for nutrition and health	How to align different government sectors with historically different priorities, stakeholders, and cultures. Unclear time scale of risks and benefits for many actions	A ministerial or cabinet leadership position is needed with oversight and budgetary authority for cross agency food and nutrition policy. <sup>78</sup> Nutrition impact assessment for all major government policies (eg, similar to environmental impact assessment now done in many countries for environmental concerns). Agricultural and trade policies to promote cultivation, transport, storage, trade, and sale of healthier foods. Coordinated nutrition policies with bordering nations, close allies, and trade partners

# Nosso foco hoje - ambiente nutricional da comunidade e do consumidor

Figure 1  
Model of Community Nutrition Environments



# Qual é o ambiente nutricional da comunidade?

- Ao nível da comunidade
- É composto pelo número, tipo, localização e acessibilidade dos pontos de venda de alimentos, como supermercados, mercearias, restaurantes de fast food e restaurantes de serviço completo
- Os determinantes do ambiente nutricional da comunidade incluem:
  - Distribuição de fontes de alimentos - número, tipo e localização dos pontos de venda de alimentos
  - Acessibilidade - proximidade do endereço residencial, pode incluir janelas de drive-through e horário de funcionamento
  - Densidade de lojas de alimentos ou o número de lojas de alimentos contidas em uma determinada área



# Qual é o ambiente nutricional do consumidor?

- O ambiente nutricional do consumidor é o que os consumidores encontram dentro e ao redor de lugares onde compram alimentos
- Os determinantes do ambiente nutricional do consumidor incluem:
  - Disponibilidade - presença, porcentagem de espaço na prateleira
  - Custo
  - Qualidade das escolhas alimentares saudáveis (frescura)
  - Perfil nutricional dos produtos
  - Promoções
  - Placement - variedade de opções, frescura
  - Informação nutricional
- 4 Ps do ambiente de nutrição do consumidor - Product Price Place Promotion

# Como esses determinantes podem ser modificados para apoiar decisões saudáveis?

How sample findings fit into the retail intervention matrix.

	More convenient to purchase	More attractive to purchase	More normal to purchase
Signage	<ul style="list-style-type: none"> <li>Floor decal arrow stickers asking people to follow the arrows to eat more nutritiously lead to a nine percent increase in produce sales (<a href="#">Payne et al. 2014</a>)</li> <li>Joint efforts to provide fish dinner recipe cards and grilling instruction brochures were part of a larger campaign that increased fish sales by 28% (<a href="#">Karevold, Tran, and Wansink 2017</a>)</li> </ul>	<ul style="list-style-type: none"> <li>New recipe ideas, co-promotions, and end-of-aisle displays increased canned fish sales by eighteen percent (<a href="#">Toft et al. in preparation</a>)</li> <li>Starring items as more healthy decreased the purchase of unstarred (less healthy foods) by two percent (<a href="#">Cawley et al. 2015</a>)</li> </ul>	<ul style="list-style-type: none"> <li>Signage stating that garbanzo beans were the most popular beans, increased selection by fourteen percent (<a href="#">Bhana 2017</a>)</li> <li>Shopping cart signs stating that the average shopper purchased at least five fruits and vegetables increased produce sales by ten percent (<a href="#">Payne et al. 2014</a>)</li> </ul>
Structure	<ul style="list-style-type: none"> <li>A fruit display near cash register increased sales 35%, even when product was not discounted (<a href="#">van Kleef, Often, and van Trijp 2012</a>)</li> <li>Items (including produce) that was within 12-in. of a shopper's eye-level comprised over 43% of all sales (<a href="#">Stein 2018</a>)</li> </ul>	<ul style="list-style-type: none"> <li>Fruit samples provided to consumers upon entering the store increased sales fruit sales by seven percent (<a href="#">Tal and Wansink 2015</a>)</li> <li>People were sixteen percent more likely to purchase a product from the first full aisle they entered than any subsequent aisle (<a href="#">Stein 2017</a>)</li> </ul>	<ul style="list-style-type: none"> <li>Visually diving a shopping cart in half and suggesting that half should be used for fruits and vegetables, increased their sales by fourteen percent (<a href="#">Wansink, Payne, and Herbst 2017</a>; <a href="#">Wansink, Soman, and Herbst 2017</a>; <a href="#">Wansink, Tran, and Karevold 2017</a>)</li> <li>Using more islands than aisles in produce aisles increased shopping time and items purchased (<a href="#">Mukund, Atakan, and Wansink 2018</a>)</li> </ul>
Service	<ul style="list-style-type: none"> <li>Healthy "Grab and Go" lines in in store cafeterias led to a 82% increase in healthy food sales (<a href="#">Hanks et al. 2012</a>)</li> <li>Mobil apps that indicated what percent of your food is healthy and which were missing, was rating as being most attractive to in-store consumers (<a href="#">Mao and Atakan 2017</a>)</li> </ul>	<ul style="list-style-type: none"> <li>In-store suggestions by staff contributed to increased fish sales (<a href="#">Karevold, Tran, and Wansink 2017</a>)</li> <li>One loyalty program rewarded fruit and vegetable purchases by providing a scaled discount based on how much was purchased<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>"Half-Plate Healthy" on-line planner, led to higher produce sales and more balanced meals<sup>a</sup></li> <li>Shopping receipt "scorecards" showed consumers how the percentage of fruits and vegetables purchased in this trip compared with past trips (based on loyalty card data)<sup>a</sup></li> </ul>

# Como esses determinantes podem ser modificados para apoiar decisões saudáveis?

Table 1. Key findings, promising strategies, and research needs

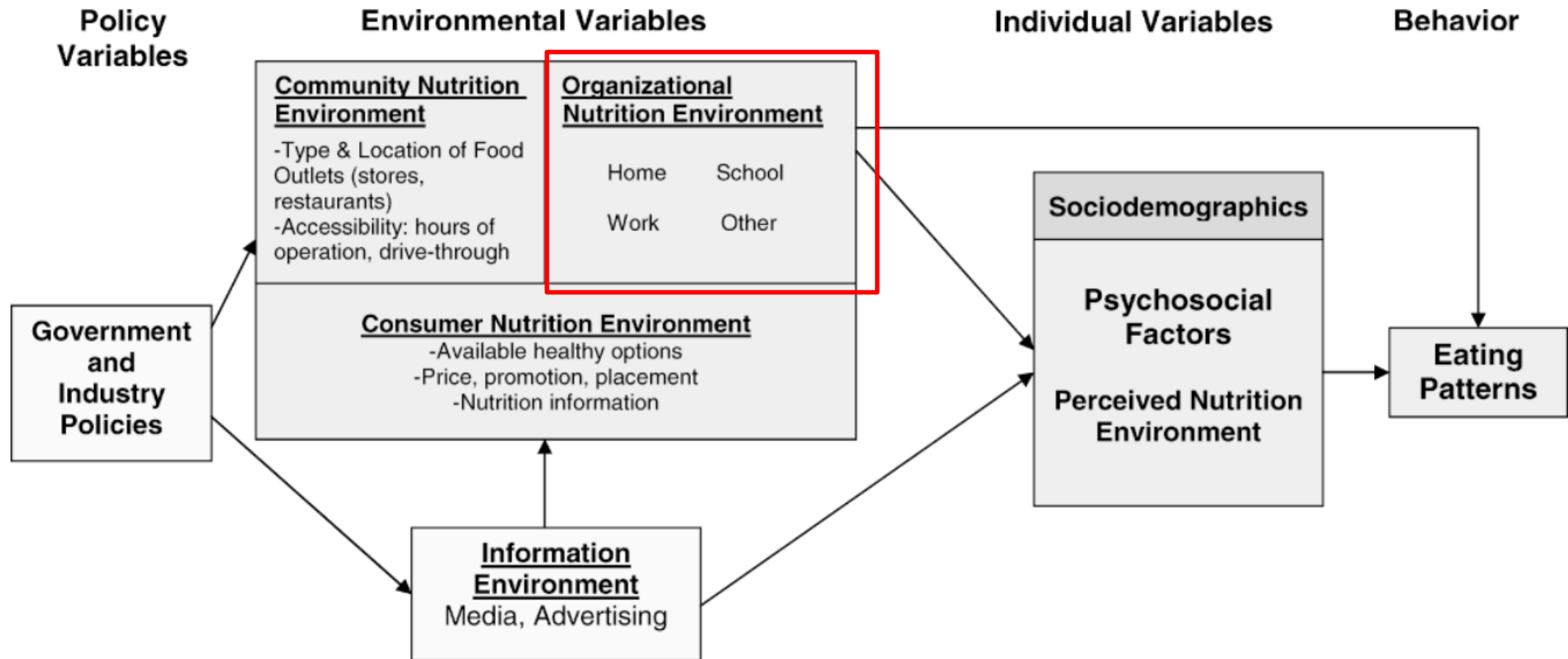
	Key findings	Promising strategies	Research needs
Products	Access to healthy foods may increase healthful eating.	Ensure availability of healthful products.	Rigorous evaluation designs, quality measures of foods and diet
	Less access to unhealthy foods may promote health.	Reduce/restrict/replace unhealthy foods.	Experimental research to supplement cross-sectional research
	Product packaging (size) and images affect purchase and consumption.	Provide small package sizes with prompts for self-regulation.	In-store research to test small packages and images on healthy items
Price	Price-change effects vary for customer subgroups.	Reduce prices for healthier items within categories (e.g., fruits, vegetables).	Evaluation of impact on varied income groups
	Coupons and cross-promotion increase product liking and purchase.	Use price reductions to increase acceptability of unfamiliar healthier foods.	Test effects and sustainability; qualitative research useful
Placement	In-store location matters; putting promoted products in prominent and “early trip” locations.	Place lower-calorie and healthier foods in visible, accessible locations.	Evaluate the use of placement manipulations in stores within and across products
	Healthy checkout aisles can be helpful for reducing unhealthy impulse purchases.	Place multiple healthy checkout aisles in stores to shift the healthy/unhealthy balance.	Rigorous impact evaluation and reliable/valid measures of checkout aisle offerings
Promotion	Most promotions of child-targeted foods are for sugary foods.	Increase promotion of nutrient-dense child-oriented foods.	Demonstration projects with health-committed cereal manufacturers
		Decrease promotion of sugary foods.	
	Shelf labels, samples and taste testing, and end-of-aisle displays are most noticed by customers.	Highlight healthy options by displays, labels, and taste-testing/samples.	Systematic manipulation of healthier options within categories in experiments

# Intervenções comuns com varejistas

- Serviços de transporte para melhorar o acesso
- Aumento de supermercados em áreas de baixo nível socioeconômico e em 'food deserts'
- Melhor posicionamento de alimentos saudáveis
- Embalagem atraente de alimentos saudáveis
- Incentivos para compras de alimentos saudáveis
- Informação nutricional no ponto de escolha
- Promoção de alimentos na loja
- Espaço de prateleira para alimentos saudáveis
- Tamanho da porção / embalagem da unidade

# Determinantes no ambiente organizacional

Figure 1  
Model of Community Nutrition Environments



# Determinantes da escolha de alimentos em creches / pré-escola

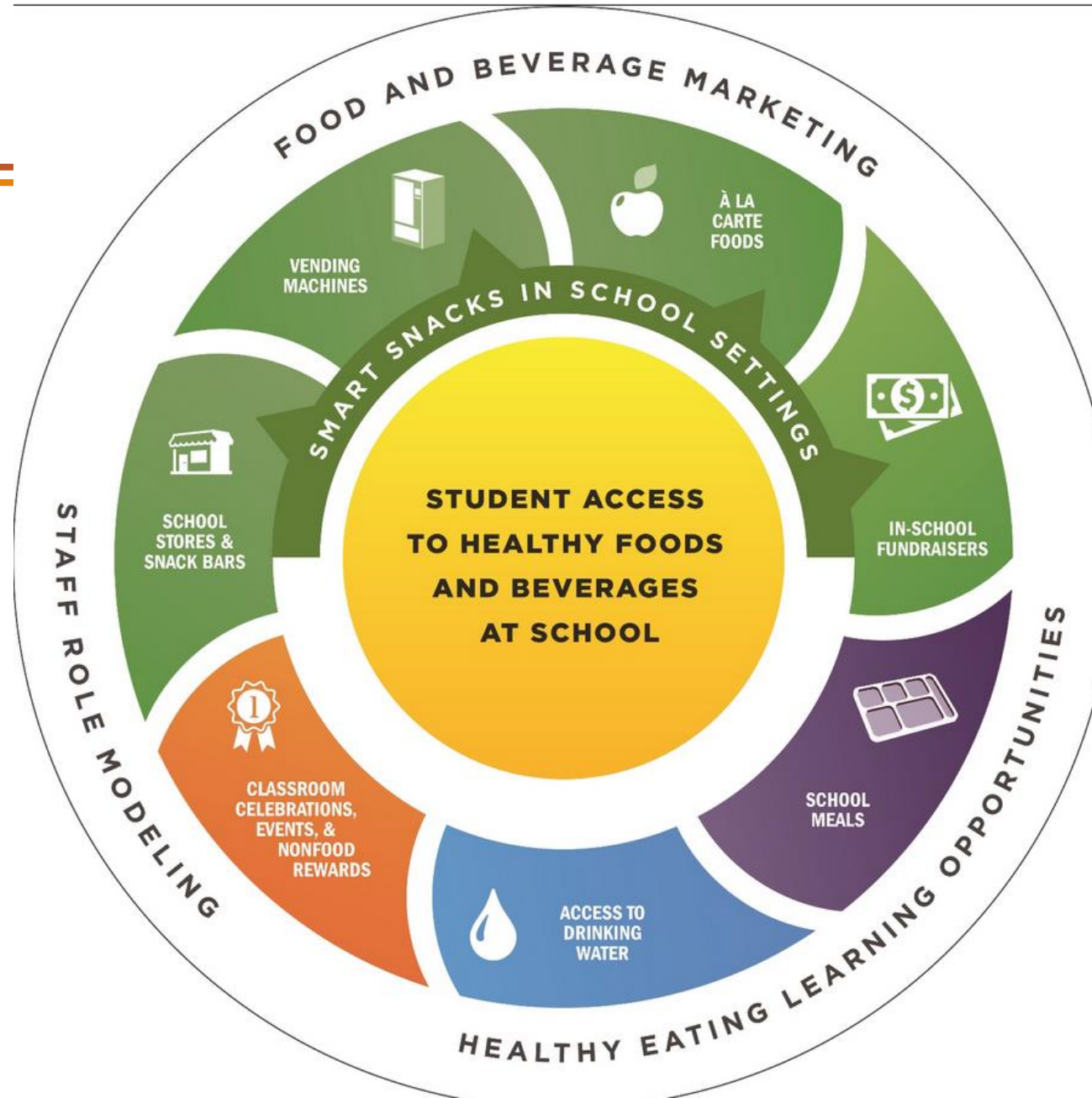
- Professores como 'role models'
- Qualidade nutricional das refeições e lanches fornecidos nesses locais
- Horário das refeições, tamanhos das porções



# Determinantes da escolha de alimentos nas escolas

- Pares
  - Influenciar a aceitação e seleção de alimentos
- Modelagem de comportamento saudável dos funcionários da escola
- Disponibilidade de alimentos
  - Cafés escolares, merenda escolar, participação da escola em programas de merenda escolar como o PNAE, máquinas de venda automática
  - Direitos de derramamento (pouring rights) - apenas um fabricante de refrigerantes comprou direto de vender
  - Estudantes como clientes, lanchonetes e máquinas de venda automática como centros de lucro
    - Cortes de financiamento do Ministério da Educação, falta de pessoal na cozinha
- Publicidade direta pela indústria de alimentos nas escolas
- Manuais com logotipos, endosso de eventos esportivos,
- Alimentos vendidos em locais formais ou informais fora da escola







# Os conceitos básicos de economia comportamental

## Três vieses comportamentais relevantes para a escolha de alimentos

### Present-Biased Preferences

- Tendência humana de enfatizar os benefícios imediatos em relação aos benefícios atrasados
- A tendência das pessoas de impor maior autocontrole nos eus futuros do que nos eus atuais
- Visceral Factor
  - Emoções e impulsos
  - Os consumidores atendem e respondem a desejos de curto prazo em favor do interesse próprio de longo prazo
  - Sistema cool vs hot - cognitivo, complexo, reflexivo e responsável pelo autocontrole, versus emocional, simples, reflexivo e amplamente impulsionado por respostas automáticas a estímulos ambientais
- Status Quo Bias and Default Options
  - As pessoas escolhem a opção atual ou padrão, mesmo quando opções superiores estão disponíveis

# Determinantes relacionados à influência social da escolha alimentar

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- Cultura social
- Normas sociais
- Modelagem social
- Redes sociais
- Mídia social

# Determinantes relacionados à família

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## **Determinantes parentais das escolhas alimentares das crianças**

- Gosto precoce e experiência com sabores alimentares no líquido amniótico
- Impacto da amamentação
- Preferências alimentares e comportamento alimentar, crenças e atitudes dos pais
- Estruturas de refeições
- Práticas de alimentação
- Estilos de coparentalidade
- Estilos parentais gerais
- Fatores sociodemográficos - educação, renda, estrutura familiar, emprego, etnia

**Table 1. Strategies to improve child's eating behaviour.**

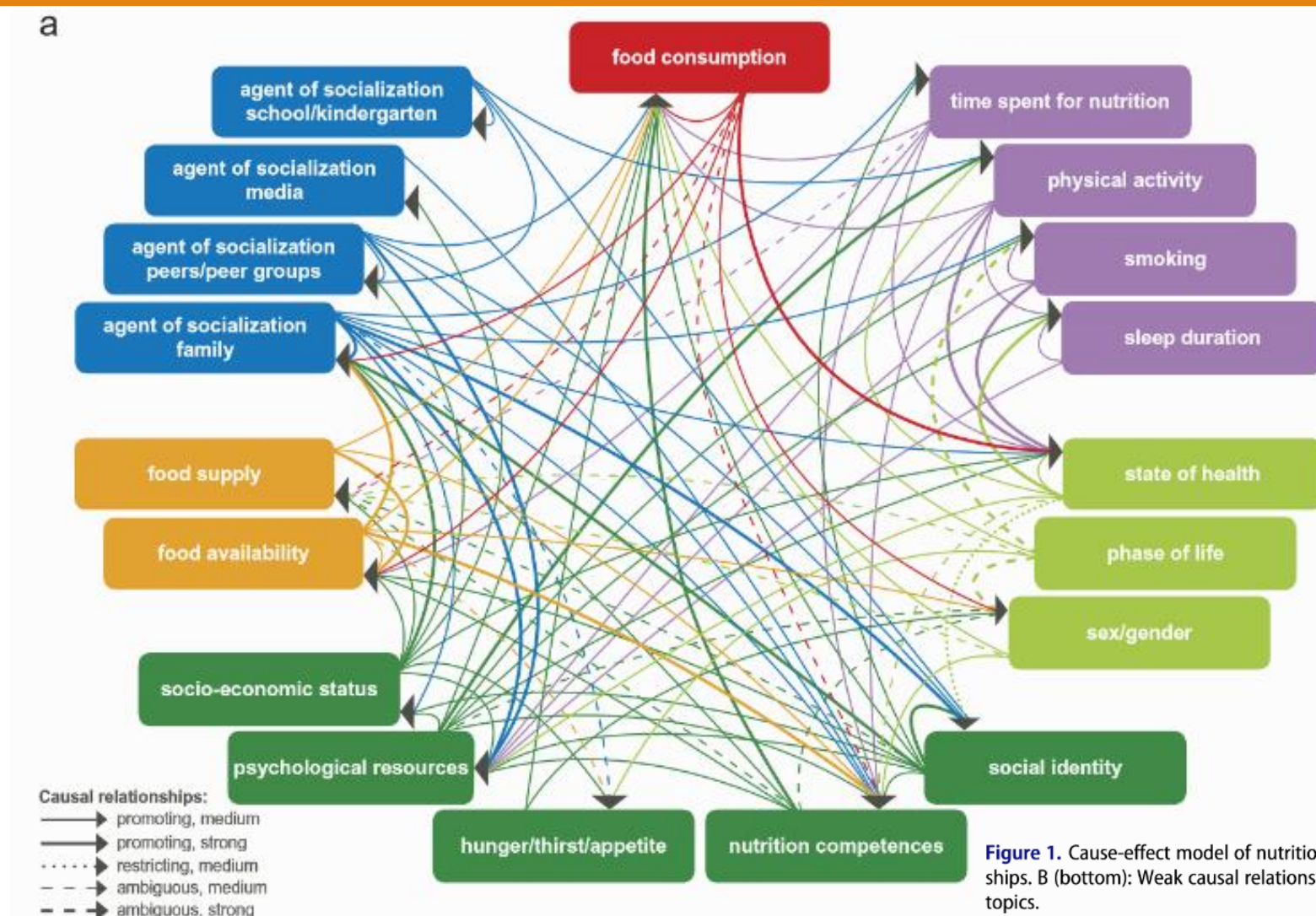
Strategy	Practices
Covert control	<ul style="list-style-type: none"> <li>- Purchasing only healthy foods at home</li> <li>- Avoidance of unhealthy stores and fast food</li> </ul>
Avoid the use of food rewards	<ul style="list-style-type: none"> <li>- Food maintains the behaviour on which its delivery and acquisition is dependent</li> </ul>
Promoting self-regulation	<ul style="list-style-type: none"> <li>- Recognition of fullness sense</li> <li>- Serving moderate portions</li> <li>- Help in organizing the feeding environment</li> </ul>
Authoritative parenting style	<ul style="list-style-type: none"> <li>- Encourage children to try new foods</li> <li>- Parents are the example</li> <li>- Parent models healthy eating and enjoyment of foods</li> <li>- Do not model disliking of foods in front of child</li> <li>- In obesogenic environment, some parental control is likely needed to moderate children's intake of palatable snack foods</li> <li>- Early responsive parenting [RP] intervention</li> </ul>
Family meals	<ul style="list-style-type: none"> <li>- Expose to a variety of foods</li> <li>- Repeatedly expose child to a food</li> <li>- Allow child to have input into food choices</li> <li>- High frequency of shared family meals</li> <li>- Daily shared breakfast</li> <li>- Socialization during mealtime</li> <li>- Turn off TV at meals</li> </ul>
Parent's focused intervention	<ul style="list-style-type: none"> <li>- Educationally-based interventions adapted to parents and caregivers</li> <li>- Feeding-related advice</li> <li>- Empowering parents</li> <li>- Social support</li> </ul>
Family environment	<ul style="list-style-type: none"> <li>- Early-life experiences with healthy tastes and flavours may promote healthy eating</li> <li>- Give the parental role in food shopping and preparation</li> <li>- Healthy food availability</li> <li>- Reduce screen time and get adequate sleep</li> </ul>

# Resumo

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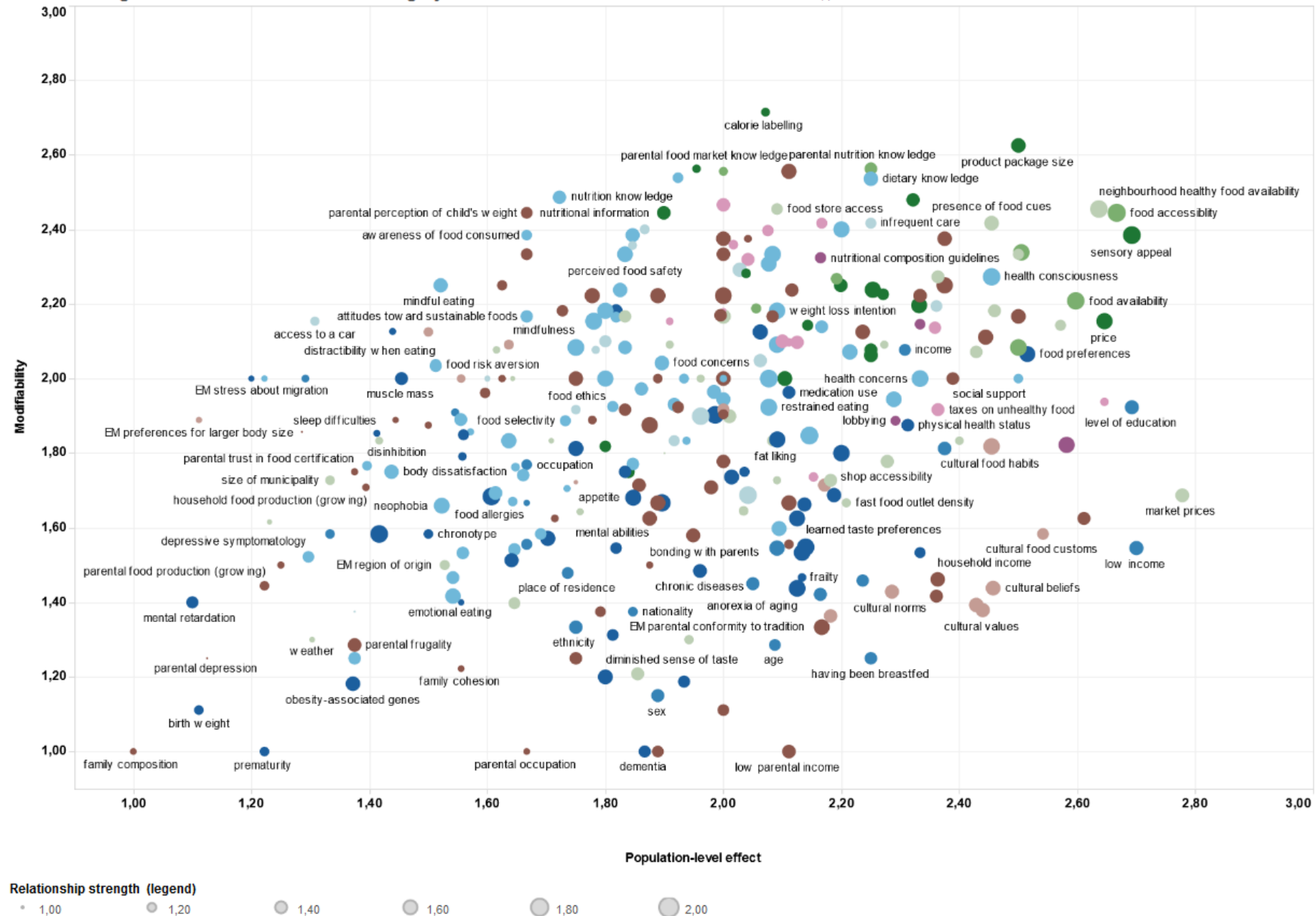
1. Determinantes políticos da escolha de alimentos
2. Determinantes do ambiente nutricional da comunidade
3. Determinantes do ambiente nutricional do consumidor
4. Determinantes no ambiente organizacional
  - i. Determinantes da escolha de alimentos em creches / pré-escola
  - ii. Determinantes da escolha de alimentos nas escolas
5. Determinantes relacionados à influência social da escolha alimentar
6. Determinantes parentais das escolhas alimentares das crianças
7. Determinantes de nível individual
  - Economia comportamental
  - O papel da indústria de alimentos

# Como tudo isso está inter-relacionado?



**Figure 1.** Cause-effect model of nutritional behavior. A (top): Strong and medium causal relationships. B (bottom): Weak causal relationships. For reasons of clarity, factors are sorted according to topics.

Detailed ratings of determinants in selected category or level - in order to view a different selection of determinants, please return to the Framework Overview tab



# Obrigada!

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