MEASURE OF THE CONSUMER NUTRITION ENVIRONMENT IS ASSOCIATED WITH FOOD SALES

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CONSUMER NUTRITION ENVIRONMENT AND FOOD SALES

<table>
<thead>
<tr>
<th>FV Availability</th>
<th>FV Prominence</th>
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<tbody>
<tr>
<td>Variety</td>
<td>Ratio</td>
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<tr>
<td>+ % fresh FV sales</td>
<td>+ % total FV sales</td>
</tr>
<tr>
<td>- % individual FV sales</td>
<td>- % total FV sales</td>
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STORE SIZE

- % total FV sales extra size
- % individual FV sales extra size

ULTRA-PROCESSED PRODUCTS

- % total FV sales extra size
- % individual FV sales extra size

PRONUNCIATION & STRATEGIC IN-STORE POSITIONS

- % total FV sales extra size
- % individual FV sales extra size

CONCLUSION AND IMPLICATIONS

This project demonstrates the importance of using different indicators of nutrition environment quality. Within a neighborhood, not all indicators are in agreement regarding the quality of the nutrition environment nor do they have the same association with food purchases.

CONSUMER NUTRITION ENVIRONMENT

There is a great variability in the nutrition environment quality between stores and neighborhoods. The results tend to indicate that FV availability is greater in higher income neighborhoods, whereas price per portion tends to be lower in lower income neighborhoods.

Although supermarkets offer a great variety of FV, they also devote a lot of shelf space to ultra-processed foods. As shown, larger stores are not as guaranteed to have healthier purchases. Therefore, it may be necessary to rethink the assumption that supermarkets are the healthiest food stores.

CONSUMER NUTRITION ENVIRONMENT AND FOOD PURCHASES

Our project adds to the existing literature showing an association between nutrition environment indicators and food purchases.

IMPLICATIONS

A broader understanding of the consumer nutrition environment and its influence on food purchasing behavior may contribute to the development of strategies to improve this environment and make healthier food choices easier.

ACKNOWLEDGEMENTS

This project was joint supported by a grant from the Canadian Institute for Health Research.

Project Summary

Our project's aim is to understand the association between the consumer nutrition environment and food purchasing behaviors. A tool designed to assess the nutrition environment was created and used to measure associated behaviors in 17 supermarkets in Montreal. Total shelf length, variety and prices of fresh, vegetables, chips, soda, and frozen entrees were measured, as well as nudges and strategic in-store placement. Results revealed that:

- High availability and prominence for ultra-processed products were positively associated with sales of frozen entrees.
- Prominence of ultra-processed foods in the store was positively associated with FV sales, but also with the proportion of preserved beverages.
- Total food and nudges for ultra-processed products were positively associated with sales of frozen entrees.
- A better understanding of the consumer nutrition environment and its influence on food purchasing behavior may contribute to the development of strategies to improve this environment and make healthier food choices easier.

Spreads correlations, n = 4 neighborhoods. Only significant associations are shown (p < 0.05).

In 2009-2010, more than half of the adult population of Québec, Canada was overweight or obese.

The estimated annual cost of overweight in the province is $3 billion dollars.

47% of the calories consumed by Québec's consumers come from ultra-processed foods.

Mean consumption of fruits and vegetables (FV) is only 6 portions per day (excluding fruits and juice).

Only 25% of the adult population meets the global nutritional recommendations from the Canadian food guide.

Food habits, including food purchasing behaviors, are shaped and conditioned by individual and environmental factors, as illustrated by the Model of Community Nutrition (Fig. 1) developed by Stokols and colleagues (2006).

In 2009, a pilot study was conducted in 5 food stores in Montréal during spring 2015. The aims were to assess the consumer nutrition environment in Québec supermarkets. These data were transformed in AC Nielsen Scantrack Grocery Service databases.

Our project adds to the existing literature showing an association between nutrition environment indicators and food purchase behaviors of Québec's food shoppers.

**Background**

**Objectives**

- Develop a measurement tool to assess the consumer nutrition environment in Québec supermarkets.
- Describe the nutrition environment of low to medium income neighborhood in Montréal, Canada.
- Explore the associations between the consumer nutrition environment and food purchasing behaviors of Québec's food shoppers.

**Methods**

- An assessment tool of the consumer nutrition environment was created based on previous literature and nutritional issues in the province. Measures of food environment (consumption of fresh produce, -MEAC) in Québec were developed. (Fig. 1), Stokols and colleagues.

- A pilot study was conducted in 5 food stores in Montréal during spring 2015. The aims were to assess the consumer nutrition environment in Québec supermarkets. These data were transformed in AC Nielsen Scantrack Grocery Service databases.

- Spreads correlations, n = 4 neighborhoods. Only significant associations are shown (p < 0.05).

**Summary**

- The number of healthy and unhealthy food choices. These include the ratio of shelf length and variety of FV to ultra-processed foods.

- Strategic positioning of Ultra-processed products sales of frozen entrees.

- Strategic in-store positions are end of aisles, coolers and ready-to-eat displays.

**Conclusion and Implications**

- A broader understanding of the consumer nutrition environment and its influence on food purchasing behavior may contribute to the development of strategies to improve this environment and make healthier food choices easier.

**Acknowledgements**

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