Online grocery shopping: promise and pitfalls for healthier food and beverage purchases

STEPHANIE JILCOTT PITTS, PHD
DEPARTMENT OF PUBLIC HEALTH, BRODY SCHOOL OF MEDICINE, EAST CAROLINA UNIVERSITY
APRIL 13, 2018

CO-AUTHORS: SHUWEN NG, JONATHAN BLITSTEIN, ALISON GUSTAFSON, MIHAI NICULESCU
FUNDER: ROBERT WOOD JOHNSON FOUNDATION HEALTHY EATING RESEARCH
Background

- Supermarkets, supercenters, and grocery stores are the source of the majority of extra calories and sugars in the diets of US residents. ¹,²

- Food and beverage purchasing decisions are influenced by factors within the cognitive / psychosocial and the community food environment domain.
  - Psychosocial domain: pester power, ³ Impulse purchases, ⁴ nutrition information
  - Community food environment: Limited geographic access to healthy food sources⁵

Online grocery shopping

- Online grocery shopping can change the way purchasing decisions are made.
- Online grocery shopping is a growing phenomenon:
  - As of 2017, 31% of Americans were likely to buy groceries online.
  - $14 billion in 2017, expected to rise to $30 billion by 2021.⁶

⁶https://www.statista.com/topics/1915/us-consumers-online-grocery-shopping/
Purpose

- To conduct a literature review to determine potential promise and pitfalls that online grocery shopping poses related to food and beverage purchase decisions.
Online grocery shopping

- **Potential promise:**
  - Fewer impulse purchases.
  - Alleviate food access problems.

- **Potential pitfalls:**
  - Targeted marketing of unhealthy foods.
  - Hesitance to purchase fresh foods online.
Methods

- Search terms: e.g., “online grocery shopping” and “internet grocery”.
- We reviewed:
  - Peer-reviewed English language studies;
  - Based in the United States or Europe;
  - Published between 2007 and 2017, focused on:
    - motivations for online grocery shopping;
    - cognitive / psychosocial domain;
    - community food environment domain.
Methods

- Used the scoping review method of Arksey and O’Malley\(^7\)
- Conducted title screen, abstract screen, and full paper screen.
- Screened for factors related to the areas of focus
  - motivations for online grocery shopping;
  - cognitive / psychosocial domain;
  - community food environment domain.
- Main reasons for exclusions
  - not conducted in the US or Europe,
  - not focused on the topic areas of interest.

Methods

- Each eligible study was entered into a table describing:
  - Study setting and Population
  - Purpose
  - Study Design and Primary Analyses
  - Main Findings

- Data were synthesized by topic area.
Pub Med Search using online grocery shopping or “internet grocery” yielded 41 manuscripts

PubMed Title screen

9 manuscripts

PubMed Abstract screen

5 manuscripts

ABI/Inform Search using “grocery shopping online” yielded 111 manuscripts

ABI/Inform Title screen

15 manuscripts

ABI/Inform Abstract screen

7 manuscripts

Google Scholar Search using “online grocery shopping” yielded 1510 manuscripts

Google Scholar Title screen

93 manuscripts

Google Scholar Abstract screen

28 manuscripts

Google Scholar Full paper screen

13 manuscripts (plus one sent by a content expert) = 14

Total = 26 manuscripts
Motivations for Online Grocery Shopping\textsuperscript{8-13}

- Convenience and saving time.
- Life events (e.g., caring for a sick family member, moving).
- Not wanting to take children into the supermarket.
- Avoiding crowds and long lines in supermarkets.
- Bulky items more frequently purchased online.

\textsuperscript{9}Campo K, Breugelmans E. Journal of Interactive Marketing. 2015;31:63-78.
Barriers to Online Grocery Shopping\textsuperscript{8,10-12,14}

- Inconvenience of waiting for deliveries.
- Delivery fees.
- Orders not being filled appropriately / inadequate substitutions.
- Less likely to comparison shop online versus in-store.
- Hesitance to purchase perishable items online.

Impulse purchases

- Impulse purchases are less frequent online versus off-line. ⁸⁻¹³, ¹⁵⁻¹⁷
- Online shopping may result in avoidance of unhealthy ‘vices’¹⁵ or ‘want’¹⁶ groceries in favor of more ‘virtuous’ or ‘should’ foods and beverages.

---

Marketing and Nutrition Information

- Studies examined promotion of healthy foods or warnings regarding unhealthy foods within simulated or existing “real” online supermarket environments.\(^\text{18-24}\)
- Navigation pages and search bar used frequently.
- “First screen” displays were the most powerful for increasing product choice.
- Food labeling (e.g., Traffic Light Labeling) resulted in increased healthy purchases.
- Offering lower-calorie within-category “swaps” for higher calorie options could improve the healthfulness of purchases.

\(^{20}\)Breugelmans E, Campo K. J Retail. 2011;87(1):75-89.
Alleviation of healthy food access barriers

- Studies examined the feasibility of using online grocery shopping to alleviate food access problems.\(^\text{25-28}\)

- Need to ensure that online grocery stores:
  - Accept federal food assistance benefits.
  - Provide delivery timelines that meet customers’ needs.
  - Address concerns related to exchanging financial information over the Internet.

---

Potential Pitfalls

- Customers are not as likely to purchase perishable items online.
  - Able to stock up on unhealthy non-perishable items easily.
- Targeted marketing of unhealthy foods could increase.
- Shopping / delivery fees may be too high.
- Need reliable transportation if “click and collect” model is used.
- Need reliable internet access.
Potential Promise

- Fewer unhealthy impulse purchases.
- Able to stock up on healthy non-perishable items easily.
- Healthy options could be emphasized more clearly in the online environment.
- Delivery option addresses limited access to healthy foods in rural and urban food deserts, as well as for injured, disabled or elderly.
Limitations & Strengths

- **Limitations:**
  - Did not use a systematic literature review methodology.
    - Potential for publication bias.
  - Assumed impulse purchases were usually unhealthy.
  - Did not examine “meal kit” phenomenon.

- **Strengths:**
  - Reviewed literature in marketing and public health.
  - Reviewed qualitative and quantitative studies.
HelloFresh U.S. revenues up 90% in 2017

Meal-kit provider to expand further with Green Chef buy

Mark Hamstra | Mar 23, 2018

Multinational meal kit subscription service HelloFresh said its U.S. business nearly doubled in the last year, and that the company expects to break even by the end of the current fiscal year.

The Berlin-based company reported a 90.1% increase in U.S. revenues, to about $674 million, based on current exchange rates. The EBITDA loss
Ongoing pilot study

- **Goal:** To test the feasibility of online shopping among WIC participants.

- **Methods:**
  - Recruit/enroll 10 WIC participants.
  - Conduct an in-depth interview regarding purchasing habits, and perspectives on online shopping.
  - Provide a $40 gift card and ask them to shop online.
  - Accompany participants to store for pick up, and in-store shopping ($35 gift card provided).
  - Audio-record all shopping experiences.
  - Ask participants to label each receipt as impulse versus planned.
  - Examine healthfulness of purchases online versus in-store, and impulse versus planned.

- **Progress to date:** Three interviews conducted.
Thoughts / questions for discussion

- What factors influence online grocery shopping adoption?
- Can online grocery shopping help alleviate food access problems for low income urban and rural consumers?
- Which online grocery shopping model (click-and-collect versus home delivery) is more conducive to making healthy purchases?
  - Does/can online shopping reduce pester power and unhealthy impulse purchases while shopping?
  - Can online shopping help consumers create & maintain healthier habits?
- What marketing techniques can be used to promote / encourage healthier choices in the online grocery shopping environment?