

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

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# Background

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- ❖ Supermarkets, supercenters, and grocery stores are the source of the majority of extra calories and sugars in the diets of US residents. <sup>1,2</sup>
- ❖ Food and beverage purchasing decisions are influenced by factors within the cognitive / psychosocial and the community food environment domain.
  - ❖ Psychosocial domain: peer power, <sup>3</sup> Impulse purchases, <sup>4</sup> nutrition information
  - ❖ Community food environment: Limited geographic access to healthy food sources<sup>5</sup>

<sup>1</sup>Drewnowski A, Rehm CD. Nutr J. 2013;12(1):59.

<sup>2</sup>Drewnowski A, Rehm CD. Am J Clin Nutr. 2014 Sep;100(3):901-7.

<sup>3</sup>Huang CY, et al. Public Health Nutr. 2016 Sep;19(13):2393-403.

<sup>4</sup>Thornton LE, et al. BMC Public Health. 2012 Mar 15;12:194.

<sup>5</sup>Larson NI et al. Am J Prev Med. 2009;36(1):74,81. e10.

# 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. <sup>6</sup>

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

## Walmart to expand grocery delivery business to 800 stores by year's end

- The service will be in 100 metro areas by the end of the year, according to Walmart.
- Orders will be packaged by "personal shoppers" in stores, and delivery is being crowdsourced from partners such as Uber.
- Amazon-owned Whole Foods, Kroger and Target, meanwhile, are investing in some of the same initiatives.

Lauren Thomas | Lauren Hirsch  
Published 12:01 AM ET Wed, 14 March 2018



Source: Walmart

Walmart plans to expand its online grocery delivery service to a fleet of roughly 800 stores by the end of the year, as competition continues to ramp up in the digital grocery aisle.

The expansion will open up the retailer to 100 metropolitan areas, 10 percent of U.S. households. It will offer

# Purpose

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- ❖ 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

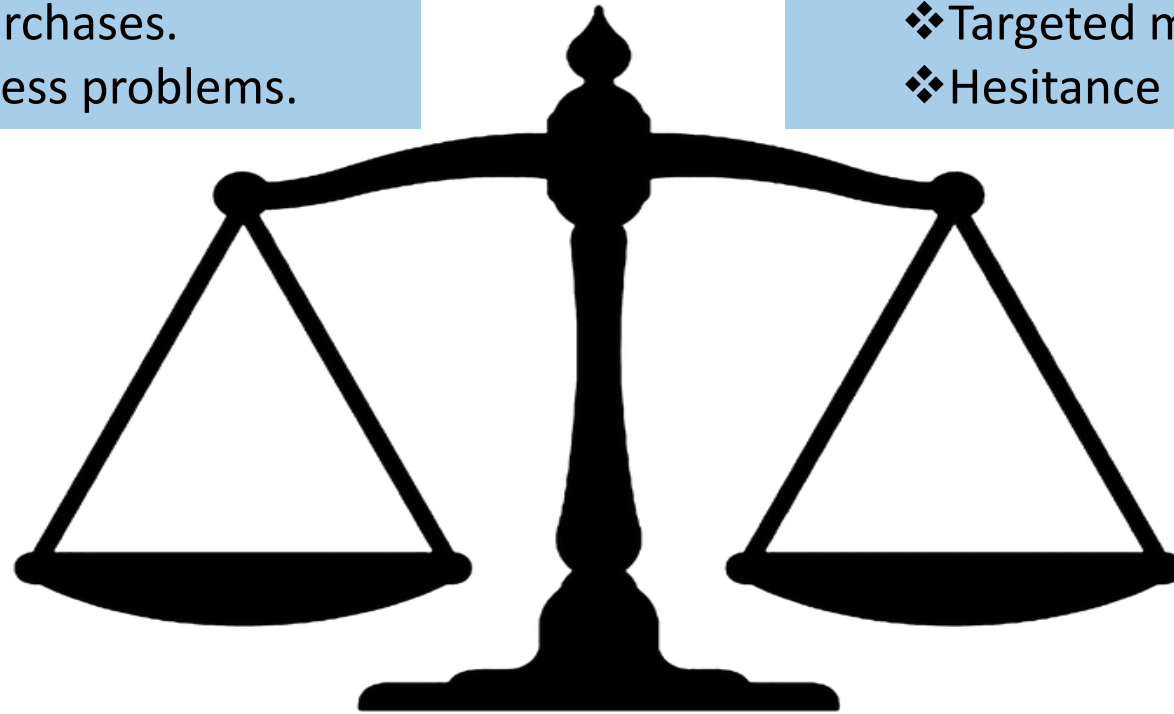
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## ❖ Potential promise:

- ❖ Fewer impulse purchases.
- ❖ Alleviate food access problems.

## ❖ Potential pitfalls:

- ❖ Targeted marketing of unhealthy foods.
- ❖ Hesitance to purchase fresh foods online.



# Methods

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- ❖ Searched PubMed, ABI/Inform, and Google Scholar.
- ❖ 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

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- ❖ Used the scoping review method of Arksey and O'Malley<sup>7</sup>
- ❖ 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.

<sup>7</sup>Arksey H, O'Malley L. International Journal of Social Research Methodology. 2005;8(1):19-32.

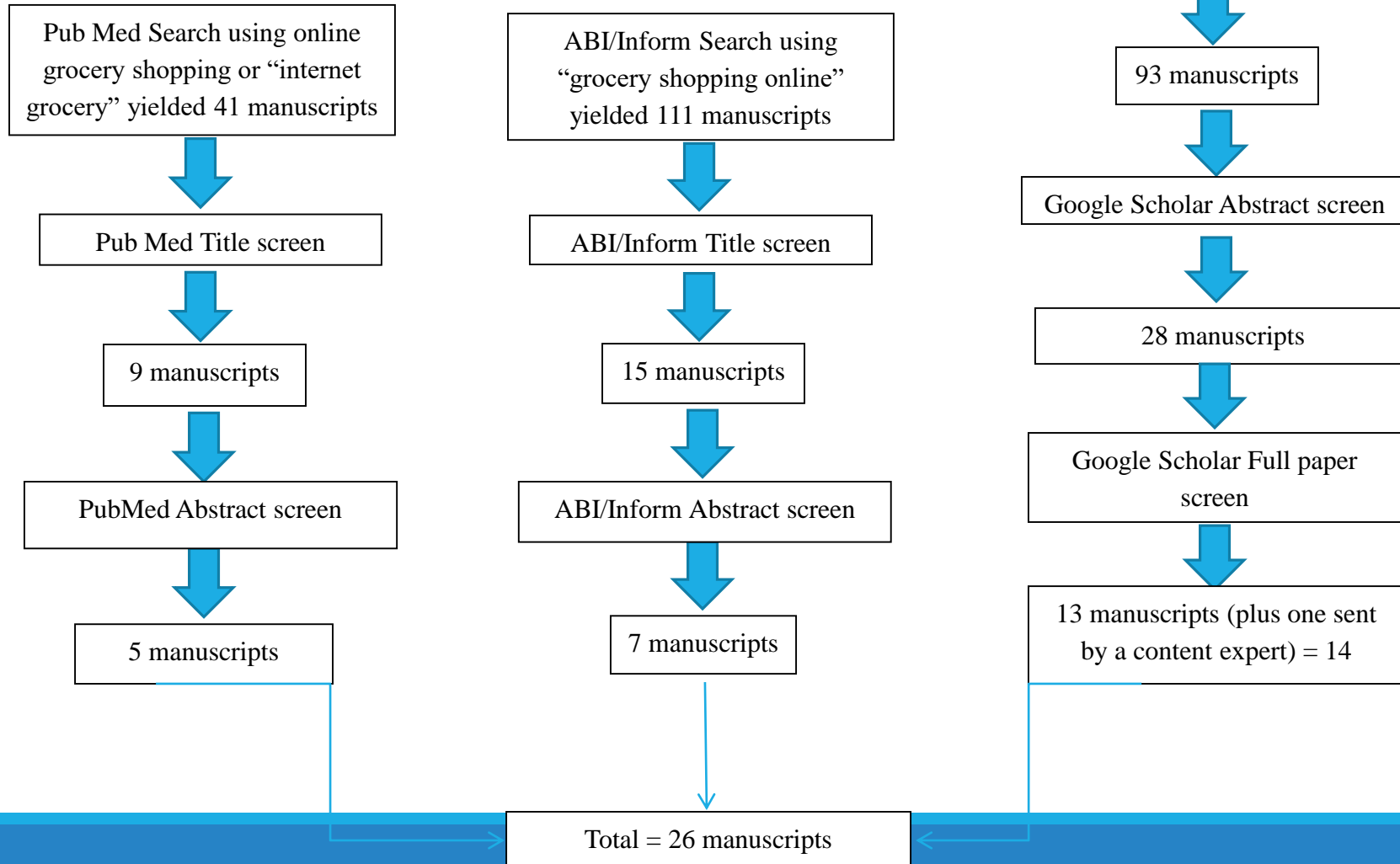
# Methods

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- ❖ 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.



# Flow Diagram of Study Selection Process



# Motivations for Online Grocery Shopping<sup>8-13</sup>

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- ❖ 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.

<sup>8</sup>Elms J, et al. *Journal of Retailing and Consumer Services*. 2016;32:234-43.

<sup>9</sup>Campo K, Breugelmans E. *Journal of Interactive Marketing*. 2015;31:63-78.

<sup>10</sup>Robinson H, et al. *The Marketing Review*. 2007;7(1):89-106.

<sup>11</sup>Hand C, et al. *European Journal of Marketing*. 2009;43(9/10):1205-19.

<sup>12</sup>Ramachandran K, et al. *The International Business & Economics Research Journal (Online)*. 2011;10(12):23.

<sup>13</sup>Harris P, et al. *International Journal of Retail & Distribution Management*. 2017;45(4):419-45.

# Barriers to Online Grocery Shopping<sup>8,10-12,14</sup>

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- ❖ 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.

<sup>8</sup>Elms J, et al. *Journal of Retailing and Consumer Services*. 2016;32:234-43.

<sup>10</sup>Robinson H, et al. *The Marketing Review*. 2007;7(1):89-106.

<sup>11</sup>Hand C, et al. *European Journal of Marketing*. 2009;43(9/10):1205-19.

<sup>12</sup>Ramachandran K, et al. *The International Business & Economics Research Journal (Online)*. 2011;10(12):23.

<sup>14</sup>Chu J, et al. *Journal of Interactive Marketing*. 2010;24(4):251-68.

# Impulse purchases

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

<sup>8</sup>Elms J, et al. Journal of Retailing and Consumer Services. 2016;32:234-43.

<sup>9</sup>Campo K, Breugelmans E. Journal of Interactive Marketing. 2015;31:63-78.

<sup>10</sup>Robinson H, et al. The Marketing Review. 2007;7(1):89-106.

<sup>13</sup>Harris P, et al. International Journal of Retail & Distribution Management. 2017;45(4):419-45.

<sup>15</sup>Milkman KL, et al. Mark Lett. 2010;21(1):17-35.

<sup>16</sup>Huyghe E, et al. J Market Res. 2017;54(1):61-74.

<sup>17</sup>Gorin AA, et al. Int J Behav Nutr Phys Act. 2007;4(1):1.

# Marketing and Nutrition Information

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- ❖ Studies examined promotion of healthy foods or warnings regarding unhealthy foods within simulated or existing “real” online supermarket environments.<sup>18-24</sup>
  - ❖ 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.

<sup>18</sup>Epstein LH, et al. Public Health Nutr. 2015;1-8.

<sup>19</sup>Benn Y, et al. Appetite. 2015;89:265-73.

<sup>20</sup>Breugelmans E, Campo K. J Retail. 2011;87(1):75-89.

<sup>21</sup>Breugelmans E, et al. Mark Lett. 2007;18(1-2):117-33.

<sup>22</sup>Ducrot P, et al. Am J Prev Med. 2016;50(5):627-36.

<sup>23</sup>Forwood SE, et al. Int J Behav Nutr Phys Act. 2015;12(1):85.

<sup>24</sup>Graham DJ, Jeffery RW. Public Health Nutr. 2012;15(2):189-97.

# Alleviation of healthy food access barriers

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- ❖ Studies examined the feasibility of using online grocery shopping to alleviate food access problems.<sup>25-28</sup>
- ❖ 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.

<sup>25</sup>Appelhans BM, et al. *Prev Chronic Dis*. 2013 May 2;10:E67.

<sup>26</sup>Gorkovenko K, et al. *Stud Health Technol Inform*. 2017;242:175-82.

<sup>27</sup>Lagisetty P, et al. *BMC Public Health*. 2017;17(1):837.

<sup>28</sup>Martinez O, et al. *J Nutr Educ Behav*. 2017 Nov 10. pii: S1499-4046(17)30952-1.

# Potential Pitfalls

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- ❖ 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

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- ❖ 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

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## ❖ 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.



RECENT

Walmart ups the ante in online grocery delivery

APR 10, 2018

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APR 09, 2018



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Retailers & Wholesalers

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FEATURED



A HelloFresh meal.

NEWS > ONLINE RETAIL

# 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

Insights on trends and industry data

# Ongoing pilot study

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- ❖ 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

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- ❖ 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?