

A Literature Review of Implemented Food Service Guideline Research Over the Last 10 Years: Major

Odessa Seng

University of Washington, School of Public Health

Themes and Outcomes

Introduction

Food service guidelines (FSGs) are standards for foods and beverages sold or consumed in a variety of settings, aiming to improve the accessibility and affordability of nutritious foods within communities.¹ Governments and institutions are increasingly adopting FSGs as a cost-effective, evidence-based strategy to promote positive dietary changes and modify chronic disease risk factors.^{1,2} Despite the growth of FSG adoption in recent years, implementation and evaluation strategies vary widely across policies and research. While a range of empirical support validates the positive impact of FSGs on nutritional and consumer environments, adoption and implementation of these policies across sectors remains low.

Methods

A broad literature scan was conducted using PubMed and citation chaining strategies as a preliminary literature review to identify key search terms and inclusion/exclusion criteria in preparation for a systematic review. Food service guideline research, evaluations, and policies published within the last 10 years in peer reviewed journals, grey literature, and white papers available in English, relating to non-school settings, were categorized in a review matrix to evaluate and summarize key themes across different settings and outcome evaluations, presented here as a narrative synthesis of findings.

Acknowledgements

I would like to thank my supervisor at Center for Science in the Public Interest, Jessi Silverman for introducing me to the importance and growth in this field of study, and to the NOPREN FSG workgroup, Stephen Onufrak, Joel Kimmons, Katie Bishop Kendrick, Meghan Murphy, and Bethany Williams for their insight and guidance.

Support for this [product] was provided in part by Cooperative Agreement Number (5U48DP00498-05) funded by the Centers for Disease Control and Prevention's Division of Nutrition, Physical Activity, and Obesity (DNPAO) and Prevention Research Centers Program, which includes the Nutrition and Obesity Policy Research and Evaluation Network (NOPREN). The findings and conclusions in this product are those of the author(s) and do not necessarily represent the official position of the CDC or DHHS.

Results

A total of 39 studies relating to FSG evaluation and implementation were tabulated with relevant study processes and outcome data. This sample of existing research highlights the broad range of evaluation strategies and outcome measures used. Key differences in environmental impact and adherence were noted between different settings and policy type, with voluntary policies and lower adherence aligning with specific areas of implementation. Below findings are summarized in a narrative summary by relevant setting or venue.

Parks & Vending

Most available body of research on FSG impact. Outcome data centered around sales impact and policy or intervention adherence, with revenue data varied based on evaluation instrument and price variations across studies.

Environmental differences resulted from FSG intervention primarily due to a reduction of unhealthy food and beverage choices, as opposed to increasing the availability of healthy options.

Cafeteria & Cafe

Adherence to nutrient guidelines in direct-to-consumer settings were typically lower compared to vending venues, adoption varied by voluntary or mandatory guidelines.

On-site technical nutrition support noted as a facilitator to successful FSG implementation within this setting

Revenue data is varied, with increased labor costs associated with trainings and labor in addition to increased customer traffic and purchases.

Hospital

Individual agency of the hospital regarding food procurement and distribution mediated policy adherence and willingness to implement FSGs

Hospitals have a wide population reach making an ideal setting to consistently provide access to healthy food to employees while exposing visitors frequently.

Workplace

Worksites provide an ideal setting for consistent interaction between employees and healthy food environments. Barriers and facilitators to healthy eating, including social structures, are notably different depending on the size and rural or urban status of a workplace

Outcome evaluations included anthropometric indicators (BMI, heart rate) more commonly, were often conducted over short periods with small study populations.

Key Findings

Consistent differences in adherence between voluntary and mandatory policies align with barriers of implementation noted in qualitative interviews, indicating a need for more targeted research in adherence differences across settings and venues to identify a solution.

Traffic light labeling and assessment presents an opportunity to be broadly implemented within policy, evaluation, and labeling of goods. Supported by strong empirical evidence as a front-of-package label, the labeling scheme is similarly utilized in FSG policies and evaluations via NEMS and the like, where cohesive industry labeling standards aligning with the Dietary Guidelines has an opportunity to facilitate smoother implementation strategies for FSG for food service workers while promoting a generalizable evaluation metric across studies.

Long-term and rigorous policy evaluation studies on FSG intervention effects on health are lacking, where sales and dietary recall data were commonly used as a proxy for dietary intake, while few studies utilize anthropometric measures across a longer time period to evaluate the impact of FSG interventions

Conclusion

There is a wide range of research relating to the implementation, efficiency, and efficacy of Food Service Guidelines. Variabilities in study quality and outcome evaluation between studies of similar interventions within the same setting may contribute to barriers in FSG adoption across sectors.

References

1. Silverman J, Amico A. A Roadmap for Comprehensive Food Service Guidelines. Center for Science in the Public Interest. September 2019.
2. CDC. Food Service Guidelines. Centers for Disease Control and Prevention. Published March 22, 2021. <https://www.cdc.gov/nutrition/healthy-food-environments/food-serv-guide.html>

References for included articles can be found [here](#)