Using the Exploration, Preparation, Implementation, and Sustainment (EPIS) Framework to Advance the Science and Practice of Healthy Food Retail

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ABSTRACT
Although healthy food retail strategies are widely used, there appears to be a limited understanding of the processes and determinants for successful adoption, implementation, and sustainment. To fill this gap, we recommend the Exploration, Preparation, Implementation, and Sustainment (EPIS) framework to be used to advance the science and practice of healthy food retail. In this perspective, we: (1) introduce EPIS and describe why it was chosen as a recommended implementation science framework for healthy food retail, (2) highlight healthy food retail evidence supporting EPIS, and (3) discuss research and practice needs moving forward.

Key Words: healthy food retail, implementation science, EPIS (J Nutr Educ Behav. 2023;55:245−251.)
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INTRODUCTION
The adoption, implementation, and sustainability of healthy food retail strategies is a priority among public health sectors and settings in the US.¹−⁴ Informed by work that has recognized the built food environment as a key determinant of health for more than 30 years,⁵ healthy food retail strategies aim to make the healthy choice the easy choice by improving opportunities for consumers to choose food and beverage products aligned with the Dietary Guidelines for Americans.⁶,⁷ Although healthy food retail strategies are widely used, there are a host of remaining research questions regarding their design and impact across contexts.⁸,⁹ A better understanding of how healthy food retail strategies are adopted, implemented, and sustained in community settings is also needed, given the large national focus.

Implementation science, or “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice”¹⁰ provides a valuable lens to address this need. We recommend the Exploration, Preparation, Implementation, and Sustainment (EPIS)¹¹,¹² framework, in particular, be used to advance the science and practice of healthy food retail within the context of US public health sectors and settings. The EPIS framework has been applied widely across disciplines and public health issues.¹² To our knowledge, it has not been used for healthy food retail research and practice. In this perspective, we (1) introduce EPIS and describe why it was chosen as a recommended implementation science framework for healthy food retail, (2) highlight healthy food retail evidence supporting EPIS, and (3) discuss research and practice needs moving forward.

An Implementation Science Framework for Healthy Food Retail

Numerous implementation science frameworks are available for researchers and practitioners to choose from,¹³ which can make selection difficult. Key considerations for choosing a framework include the framework’s purpose and operationalization, ecological levels, and the intended setting or intervention.¹⁴,¹⁵ We selected EPIS because it is a simple and practical framework connecting diverse, healthy food retail partners (eg, researchers, practitioners, advocates, and policymakers) and because of its design in relation to this topic. The EPIS framework was
designed for public service settings and was originally used to translate social service and allied health treatments (ie, mental health, substance abuse) to practice. Healthy food retail strategies are also often delivered among public sectors and settings in the US, given they are one of several policy, systems, and environmental (PSE) changes prioritized by federal and state agencies to mitigate nutrition inequities among Americans living in lower-income and low-resource communities.

For example, The US Department of Agriculture Supplemental Nutrition Assistance Program—Education (SNAP-Ed) and, more recently, the Expanded Food and Nutrition Education Program fund nutrition education and PSE change initiatives within communities with lower incomes to remove barriers to meeting the Dietary Guidelines for Americans. The Gus Schumacher Nutrition Incentive Program (GusNIP) funds nutrition incentive and produces prescription programs to incentivize fruit and vegetable purchases among lower-income consumers. The Centers for Disease Control and Prevention (CDC) also funds community PSE changes through several mechanisms, including the High Obesity, Racial and Ethnic Approaches to Community Health, and State Physical Activity and Nutrition Programs. Although the intended food retail settings for healthy food retail strategies are not usually public service settings, the food retailers who partner on these efforts often follow government guidance for product stocking (eg, SNAP or Special Supplemental Nutrition Assistance Program for Women, Infants, and Children authorization) or may choose to engage in strategic public health partnerships.

The national funding priorities and federal nutrition assistance program stocking standards provide 1 example of how the wider social and political context can influence public health practice, partnerships, and priorities, specifically in healthy food retail. The program examples described above are typically facilitated by public health researchers and practitioners among organizations such as Cooperative Extension Services, state and local health departments, and nonprofit organizations. There are several noted challenges with respect to public health practitioners’ capacity and resources to adequately facilitate PSE changes, including healthy food retail. As such, an implementation science approach that studies both the process and determinants of the success or failure of healthy food retail is necessary. The EPIS framework outlines a process to understand how public health researchers and practitioners can move from evidence to impact, emphasizing factors determining the success or failure of healthy food retail strategy adoption, implementation, and sustainment. That is, another advantage of consistently using EPIS for healthy food retail research and practice is that it is both a process and a determinant framework. Finally, public health practitioners also frequently document various steps of programming (eg, needs assessments, impact evaluations) with respect to effectiveness outcomes (consumer diet quality, food security). We posit EPIS complements these already existing formative and outcome evaluations and is a key instrument in the public health practitioner toolkit.

The EPIS Framework

Regarding healthy food retail, we used process and determinant language for EPIS on the basis of a systematic review of EPIS applications across fields that informed the evolution of the framework from the original version. There are 4 EPIS process phases, including exploration, preparation, implementation, and sustainment, and 16 EPIS constructs or determinants among multiple levels, including the outer context, bridging factors, innovation factors, and inner context that serve as a guide during each EPIS phase (see Table for definitions). These factors are dynamic and interrelated.

The initial EPIS phase Exploration is used to identify the need for healthy food retail and the fit of strategy options across partners and contexts. Once adopted, the EPIS Preparation phase is initiated, in which the focus is on identifying contextual and multilevel barriers and facilitators (determinants) to the selected healthy food retail strategy. Highlighting these factors informs the need for implementation strategies or “the stuff we do to help people/places do the thing [healthy food retail strategy].” Although 73 implementation strategies are currently recommended on the basis of a largely clinical body of evidence, there is an additional need to understand the use and impact of implementation strategies for healthy food retail. Importantly, planning for the end (ie, healthy food retail strategy implementation and sustainment) during the EPIS Exploration and Preparation phases is a key consideration.

During the EPIS Implementation phase, healthy food retail and selected implementation strategies are implemented in the intended setting (eg, food store, farmers’ market). There is a focus on support/monitoring for quality and fidelity and on documenting any adaptations used to facilitate implementation, such as responsive changes to a healthy food retail or implementation strategy to improve feasibility. The outcomes of selected implementation strategies regarding how well they facilitated implementation would also be captured during this phase. Finally, the EPIS Sustainment phase focuses on maintaining healthy food retail strategies over time while reassessing and documenting needed support.

Healthy Food Retail Evidence in Support of EPIS

We pull evidence supporting EPIS for healthy food retail from 3 review articles that provide a comprehensive account of the state of the science (Table). A recently published review of reviews examined evidence across 25 reviews, including hundreds of original research studies regarding factors that influence the implementation, sustainability, and scalability of healthy food retail strategies; however, the authors did not use an implementation science framework. In our opinion, this was a missed opportunity to
move beyond characterizing what influences adoption, implementation, and sustainment (and eventual scaling) to understand how these decisions can best be supported across diverse communities or contexts.

We pull examples from 2 additional review articles26,27 as a supplement, given that Gupta et al.28 did not examine factors influencing healthy food retail strategy adoption. Houghtaling et al.27 and Middel et al.26 used a multilevel approach to examine 31 studies for determinants of US retailers’ decisions about healthy food retail and 41 studies for barriers and facilitators to healthy food retail in the international literature, respectively. We categorize results across these sources using EPIS in the Table26−28 to show the potential value of using EPIS to understand implementation outcomes as they relate to adopting, implementing, and sustaining healthy food retail strategies.

These common barriers and facilitators to healthy food retail across various settings (Table)26−28 allow us to recommend implementation strategies that may be useful in planning. The Expert Recommendations for Implementing Change strategies23 provide a starting point for identifying, tailoring and using implementation strategies in community settings.24 Given shared barriers, changing the physical structure and equipment, providing funding for evidence-based programming, and creating a learning collaborative or providing supervision are strategy examples likely needed to facilitate healthy food retail strategies.23,24 Furthermore, given the paucity of information in the literature, implementation strategies such as developing and implementing tools for quality monitoring or using an implementation advisor will also likely be useful to researchers and practitioners.23,24

DISCUSSION
This perspective was not intended to be a review of the literature. Rather, we referenced findings from a large body of healthy food retail evidence26−28 to suggest gaps in and future directions for applying implementation science concepts to advance healthy food retail science and practice using EPIS. Future efforts to capture the process of healthy food retail and the determinants that influence adoption, implementation, and sustainment using EPIS are needed with respect to particular community contexts (eg, rural, high crime, historically low-resourced), food retail settings (eg, grocers, convenience/corner stores, farmers’ markets, corporate vs independent stores, etc), public health practice agencies (eg, Cooperative Extension Services, Department of Health), or funding mechanisms (eg, GusNIP, SNAP-Ed). This would allow for the specificity and standardization required to understand what works, for whom, and under what circumstances and identify shared implementation approaches that support healthy food retail across diverse contexts and settings.

This path forward to advance the science and practice of healthy food retail using EPIS is as important as understanding effectiveness in specific community settings. A common critique of our perspective questions the need to focus on implementation science without a proven, evidence-based practice regarding healthy food retail strategies. Although effectiveness research is important, healthy food retail strategies are already prioritized1−4 and implemented widely without sufficient documentation of implementation approaches and outcomes. For example, 56% of SNAP-Ed implementing agencies in 2016 planned to facilitate PSE changes in places in which people shop (healthy retail), which was an increase from 31% in 2014.29 GusNIP projects (nutrition incentive, produce prescription, or both) expanded reach from 17 to 33 states and the District of Columbia from 2019 to 2021.30 However, in our opinion, not prioritizing implementation science for healthy food retail risks inefficiency or inability to establish a set of best practices for supporting public health practitioners to facilitate (through partnerships,31 co-creation,32 and technical assistance23,24) healthy food retail adoption and implementation and threatens the likelihood these strategies are sustained. We also may thwart opportunities for de-implementing34 potentially less effective healthy food retail strategies in favor of those more capable of population impact. Readers are directed to hybrid designs detailed by Curran et al.34 regarding balancing effectiveness and implementation outcomes in research and practice.

Outcomes of future studies and focused literature reviews that are planned using EPIS, in addition to practice-based knowledge, could inform any needed changes to EPIS phases or constructs on the basis of the type of healthy food retail strategy or practice organization. We recommend the implementation project adaptation worksheet15,35 for documenting EPIS changes with appropriate rationale, as it provides a standardized tool for documentation and dissemination. The worksheet
<table>
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<tr>
<th>EPIS Constructs</th>
<th>EPIS Construct Definitions and Examples&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Healthy Food Retail Evidence&lt;sup&gt;26-28&lt;/sup&gt;</th>
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<tr>
<td>Outer context (ie, everything external to the retail setting)</td>
<td>Definition: State and federal sociopolitical and economic contexts that influence the implementation and delivery/use of the innovation. Examples: Policies, legislation, monitoring and review, auditing, mandates.</td>
<td>Barriers: Community crime&lt;sup&gt;26,27&lt;/sup&gt;, geography&lt;sup&gt;27&lt;/sup&gt; Facilitators: Enabling policies&lt;sup&gt;28&lt;/sup&gt;, geography&lt;sup&gt;27&lt;/sup&gt;</td>
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<td>Service environment/policies</td>
<td>Definition: Fiscal support provided by the system in which implementation occurs. Fiscal support can target multiple levels (eg, staff training, fidelity monitoring, provision of the innovation/EBP) involved in the implementation and delivery/use of the innovation. Examples: Contracting arrangements, grants, fee-for-service, addition to the formulary, capitation fees, incentives.</td>
<td>Barrier: Lack of financial support&lt;sup&gt;26,27&lt;/sup&gt; Facilitator: Incentives for producers, manufacturers, and retailers to offer healthy food retail strategies&lt;sup&gt;28&lt;/sup&gt;</td>
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<td>Funding/contracting</td>
<td>Definition: Characteristics and behaviors of key decision-makers pertinent at all levels which are necessary but not sufficient to facilitate or promote the implementation process and delivery/use of the innovation. Examples: Transformational leadership, implementation leadership.</td>
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<td>Leadership</td>
<td>Definition: Relationships of professional organizations through which knowledge of the innovation/EBP is shared and/or goals related to the innovation/EBP implementation are developed/established. Examples: Interorganizational collaboration, commitment, competition, co-operation.</td>
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<tr>
<td>Patient/client (consumer) characteristics</td>
<td>Definition: Demographics and individual characteristics of the target population/end user. Examples: Socioeconomic status, health condition, comorbidities, age, gender, motivation.</td>
<td>Barriers: Perception that consumers have low demand for healthy food and the perceived alignment of healthy food retail with consumer needs and preferences&lt;sup&gt;22&lt;/sup&gt; Facilitators: Increasing consumer demand for healthy food and the perceived alignment of healthy food retail with consumer needs and preferences&lt;sup&gt;28&lt;/sup&gt;</td>
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<tr>
<td>Patient/client (consumer) advocacy</td>
<td>Definition: Support or marketing for system change based on consumer needs, priorities and/or demographics. Examples: Client advocacy, class-action lawsuits, consumer organizations.</td>
<td>Facilitator: Co-creating healthy food retail strategies&lt;sup&gt;22&lt;/sup&gt;</td>
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<tr>
<td>Innovation factors (ie, characteristics of healthy food retail strategies)</td>
<td><strong>Innovation/EBP developers</strong> Definition: Characteristics of the individuals or team(s) responsible for creating the EBP/innovation that may be the subject of implementation efforts. Examples: Engagement in implementation, continuous quality improvement, rapid-cycle testing, prototyping.</td>
<td>Barrier: Certain healthy food retail strategy characteristics&lt;sup&gt;28&lt;/sup&gt; Facilitators: Low-cost and profitable healthy food retail strategies&lt;sup&gt;28&lt;/sup&gt;, quality marketing materials and media promotions&lt;sup&gt;26&lt;/sup&gt;</td>
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<td></td>
<td><strong>Innovation/EBP characteristics</strong> Definition: Features or qualities of innovations to be implemented. Examples: Complexity, ease of learning, cost, burden, reporting requirements.</td>
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<td><strong>Innovation/EBP fit</strong> Definition: The extent to which the innovation/EBP fits the needs of the population served or the context in which it is implemented. Examples: Innovation/EBP structural and process fit with system, organizations, providers, patients/clients.</td>
<td>Barrier: Business model alignment with healthy food retail strategies&lt;sup&gt;28&lt;/sup&gt;</td>
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<sup>a</sup>EPIS = Exploration, Preparation, Implementation, and Sustainment; EBP = Evidence-Based Practice.
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<th>Bridging factors (ie, partnerships and persons that facilitate healthy food retail)</th>
<th>Definition: Active partnerships between researchers and key community stakeholders, who can represent multiple levels involved in implementation (eg, system representatives, organizational leaders, providers, consumers), that can facilitate successful implementation and delivery/use of the innovation. Examples: Community participation, partnerships, ongoing positive relationships, valuing multiple perspectives.</th>
<th>Barrier: Poor partner engagement[^28] Facilitators: Establishing positive partnerships that facilitate engagement and leveraging trained community members[^28]; effective partner communication[^27]</th>
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<tr>
<td>Community academic (or public health) partnerships</td>
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<td>Purveyors/intermediaries</td>
<td>Definition: Organizations or individuals providing support or consultation for implementation and/or training in the innovation. Examples: Implementation readiness assessment, strategy development, training support.</td>
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<td>Inner context (ie, everything internal to the retail setting)</td>
<td>Definition: Structures or processes that take place and/or exist in organizations that may influence the process of implementation. Examples: Culture, climate, readiness for change, structure, leadership, receptive context, absorptive capacity, social network support.</td>
<td>Barrier: Smaller store size[^26]; retailer-manufacturer contractual agreements[^27,^28] Facilitators: Culture of innovation/experimentation, established planning procedures, and transparent organizational communication[^25]; priority for supporting community health[^26,^27]; providing store infrastructure support for healthy food retail strategies[^26]</td>
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<td>Organizational characteristics</td>
<td>Definition: Characteristics and behaviors of individuals involved in oversight and/or decision-making related to EBP implementation within an organization. Examples: Competing priorities, use of climate/culture embedding mechanisms, transformational leadership, implementation leadership.</td>
<td>Barrier: High cost of healthy foods, losing profit or sales, outsourcing, and business and public health priority conflict[^28]; leadership’s attitude, cooperation, and capacity to make decisions about the store[^28]; retail competition[^27] Facilitators: Retailers with business training and leadership attitude, cooperation, and capacity to make decisions about the store[^28]</td>
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<td>Quality and fidelity monitoring/support</td>
<td>Definition: Processes or procedures undertaken to ensure adherence to active delivery of the innovation/EBP and/or an implementation strategy. Examples: Fidelity support system, quality assurance evaluation, continuous quality improvement.</td>
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<td>Organizational staffing processes</td>
<td>Definition: The processes or procedures in place at an organization related to the hiring, review, and retention of staff involved in the active delivery of the innovation/EBP and/or its implementation. Examples: Professional training and qualification related to EBP delivery, staff turnover.</td>
<td>Barriers: Lack of resources like retailer time and staff[^28]; lack of retailer-focused training[^28] Facilitators: Affordable staffing and sufficient skills[^28]</td>
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<tr>
<td>Individual characteristics</td>
<td>Definition: Shared or unique characteristics of individuals (eg, provider, supervisor, director) that influence the process of implementation. Examples: Attitudes toward EBP, demographics and/or background, client characteristics, job demands.</td>
<td>Barriers: Retailer discontent and knowledge and beliefs[^28] Facilitators: Shared cultural and ethnic attributes among partners/consumers, certain personality attributes[^26]; knowledge and beliefs[^28]</td>
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EBP indicates evidence-based practice.

*a* Constructs, definitions, and examples are verbatim from the source.[^12]

Note: Blank cells indicate no results in the cited systematic reviews focused on these EPIS constructs. The inclusion of gray literature alongside peer-reviewed sources in applications of EPIS to healthy food retail is recommended.
could be used alongside EPIS in applied training with Cooperative Extension or Department of Health agencies that facilitate healthy food retail, for example. Furthermore, some investigators have applied the Consolidated Framework for Implementation Research (CFIR), a comprehensive determinant framework, to explore healthy food retail implementation outcomes. Although EPIS is a stand-alone framework, CFIR could complement EPIS, especially if used to inform the potential expansion of construct determinants found important to healthy food retail, as shown in the Table. However, it is important to note that CFIR is not a process framework and may have limited application to this work in comparison.

The EPIS framework can also be used to develop a standard set of quantitative measures aligned with EPIS constructs to advance the science and practice of healthy food retail. For example, there are a few existing readiness measures for healthy food retail that could help build the evidence base regarding EPIS. A host of other EPIS measures have also been developed for other public health topics that might be useful if adapted and validated among diverse, healthy food retail contexts. Standard EPIS tools could help to determine how public health programming could support food store leadership (culture, climate) and procedures (staffing) to improve the likelihood healthy food retail strategies are successful while also creating a shared language between the 2 sectors, given retailers may care about these outcomes independent of healthy food retail. Furthermore, such tools could help already burdened public health practitioners prioritize implementation needs for healthy food retail.

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