Small Food Stores in Rural Communities: Challenges and Insights

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Study Overview

Literature Review (50 papers)

Store-Owner Interviews (15 urban, **15 rural**) + modified NEMS-S

Content Expert Interviews (N=18)

Review of existing measures

Development of Toolkit

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30-40% of studies have some emphasis on rural areas

Many (~70%) studies are descriptive/observational, with most utilizing secondary data

Need for greater variety in measurement and more valid/reliable tools

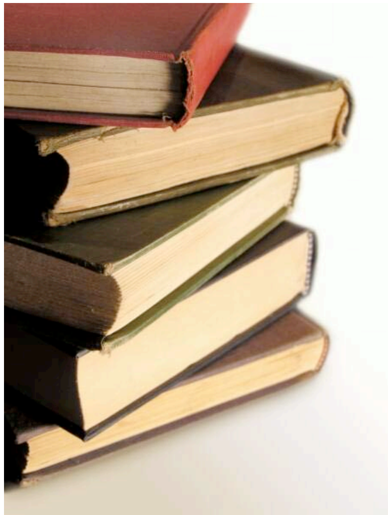
Need more experimental and longitudinal studies

Study Type	Study classification/ Research Design	Data Source	Setting (grocery, corner)	Constructs assessed	Measures Used	Implications - Measurement	Sample	Location	Rural/Urb
Descriptive/observational	Cross-sectional; correlation between food access and BMI or consumption	Secondary (NAICS) ... ground truthing	food store [includes some CS, not main focus]	spatial inequalities (neighborhood socioeconomics and minority status) and potential food access	ground truthing through observing, identifying, and geocoding	food store is defined as retailing a general line of food products, includes supermarkets, full-line grocery stores, convenience stores or food marts (with and without gasoline pumps), discount stores, beverage stores, pharmacies and drug stores, and specialty food stores that are fixed or mobile	food stores in 6 rural Texas counties	Texas Brazos Valley	Rural
Descriptive/observational	Cross-sectional; correlation between food access and BMI or consumption	Secondary (D&B, ... census)	fast food restaurants, pizzerias, small grocery stores, and convenience stores [includes some CS, not main focus]	prevalence of food outlets near schools, disparities by economic and race/ethnicity	calculating meters to food outlets and schools using D&B and SIC codes; disparities by census	Supports previous research that built food environment has an affect on dietary habits among children and adolescents; 400 & 800 m network buffer around each school	NYC public school students	New York City	Urban
Descriptive/observational	Cross-sectional; correlation between food access and BMI or consumption	Secondary (dept of Ed, InfoUSA-NAICS)	convenience ... service restaurant, snack store, off-licences/liq... surrounding schools [includes some CS, not main focus]	food outlets near public middle and high schools in USA	Multivariate analysis of 400 and 800 meter buffer zones of schools using Department of Education's Common Core of Data and InfoUSA company NAICS food outlet listings (including corner stores)	Business classifications were done using the NAICS codes; the study notes that an important category for students is snack establishments (industry 722213), which primarily sell ice cream, donuts, biscuits, sweets, non-alcoholic drinks, sodas, and coffee - *something to keep in mind if we use NAICS codes in our own research?*; 400 & 800 m network buffer around each school	students in United States secondary public schools	USA	rural and
Descriptive/observational	Cross-sectional; correlation between food access and BMI or consumption	Secondary (Fitnessgram, InfoUSA, the California Department of Education, and the 2000 US Census)	fast food restaurants and convenience stores in proximity to schools [includes some CS, not main focus]	food outlets near schools ... california, and childhood overweight	... data), InfoUSA company NAICS food outlet listings (i...	Findings are consistent with literature on both school and residential exposure to convenience stores; availability of fast food restaurants and convenience store within .5 mile of schools with childhood overweight	California 5th, 7th and 9th graders	California	Rural and
Descriptive/observational - part of a larger study and involved primary data collection with PC dyads	Cross-sectional; correlation between food access and BMI or consumption	Primary	restaurants (including fast food), convenience stores, grocery stores, and other retail facilities [includes some CS, not main focus]	neighborhood food environments, adolescent nutrition and weight status	dietary ... behaviors, GIS 800, 1600, and 3000 meter buf... outlet data	Supports previous research that interventions aimed at increasing neighborhood access to healthy foods (like healthy corner stores) are needed to influence adolescent dietary intake and weight status; 800, 1600, and 3000m network buffers around participants' homes and schools	Adolescent (11-18) /parent dyads living in Minneapolis-St. Paul metropolitan region	Minneapolis/St. Paul	Urban
Descriptive/observational	Cross-sectional; correlation between food access and BMI or consumption	Secondary (D&B, fitnessgram, ACS, National Center for Education Statistics)	corner stores and fast-food restaurants [includes some CS, not main focus]	distribution of corner stores and fast foods and prevelance of student overweight	Dunn and Bradshaw food outlet infromation and California Department of Education fitness testing information	for purposes of this study corner stores were defined as chain convenience stores, nonsupermarket grocery stores ... buffer around each school relative to at least 1 fast food restaurant of corner store	students in grades 5,7, and 9 in LA County schools	LA County, California	Urban
Descriptive/observational (with more variables and ...	Cross-sectional; correlation between food access and BMI ...	Primary and Secondary (geo-coded NAICS ...	SFS (small food stores) and fast food restaurants [includes some CS- termed SFS here, not main focus]	distance to food stores and restaurants, fruit and vegetable consumption, home food ...	Cullen Food Frequency Questionnaire, ...	SFS (small food stores) inlcue food stores other than large supermarkets which sell food ... convenience stores and drug stores. *This might be a good classification for corner stores?* 1 mile buffer of the participants' home address relative to number or density of food outlets	10-14 yo male children in ...	Houston, Texas	Urban

Abstraction | Evidence rating | Cross-sectional | Experimental | Longitudinal | Measurement | Qualitative | Review | Eliminated after full text | Search String | Fact

Literature Review – Rural Store Specific Findings

- Secondary data sources may not capture small stores in rural areas → ground truthing with observations
- Corner stores described sometimes as the only source for food within hundreds of miles
- Limited availability and perceived costs of healthful food influences purchasing behaviors



Creel et al., 2008; Gustafson et al., 2012; McGee et al., 2011; Sharkey et al., 2009; 2013

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Stores Targeted

- Small stores with 2 or fewer cash registers
- In a rural area with limited food access – no other store for at least 10 miles
- Stores identify as small grocery, market or convenience stores, some attached to gas station

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Store Owner Interviews - Methods

Interviews with store-owners:

- Describe their store, role in the community, interactions and descriptions of customers
- Details about operations and current practices, opportunities for change
- Reasons motivating practices (i.e., layout, signage, deliveries)
- Feasibility and attitudes toward future healthy initiatives

Modified NEMS-S:

- Conducted in stores throughout Omaha previously
- Consider unique components of healthy access within urban and rural areas of Nebraska

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Where are these stores?

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Store Owner Interviews

Preliminary Results – Healthy Food Promotion

- Not interested in promoting healthy foods: "I don't care whether it's all healthful or not, just so you can sit down and have the basics for a good family meal."
- Cost and customer demand: "I would like to see more fruit items...say, a basket of bananas. Especially in the summer, because I think especially travelers would like to see oranges, apples, bananas, something that they could just grab --they would rather do that than a snack cake."
- Customer request: "Probably request would be the highest [influence on what the store stocks]."

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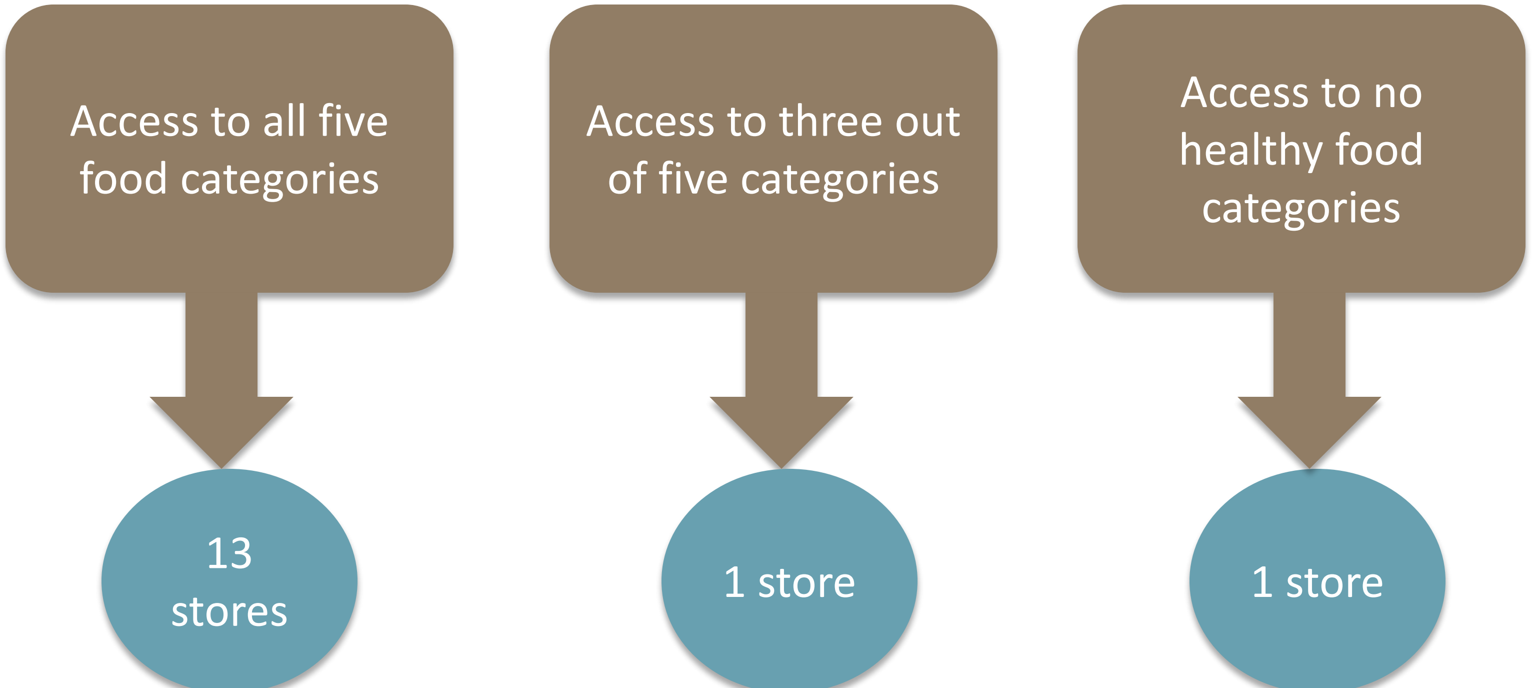
Rural Stores are Stocking Healthy Already

- NEMS-S assessment
  - Observational measure that assesses availability of healthy foods across 5 categories (low-fat dairy, whole grains, fruit, vegetable, lean meats)



Store Owner Interviews

Preliminary Results – Perceptions of Superstores

- Superstores are a barrier:
  - "People always say that superstores are so cheap but if they would go around and look or shop, our prices are comparable."
  - "They are putting in one store after another and getting the same government funding that we couldn't qualify for."

- Customers' willingness to drive several miles to large discount stores:
  - "They think they can drive 70 miles, go to a superstore and buy $100 groceries, and think they're saving money. It ain't true, but they'll do it and it's a mindset you just cannot knock out of 'em."

Store Owner Interviews
Preliminary Results – Perceptions of Superstores

- Customer's willingness to drive
  - "Um, when gas prices are high it helps, people stay in town and they shop local, when gas is down they'll drive …. And the same people that don't have the loyalty that drive out of town also complain when they do come in here that they don't have everything that they need, and you try to explain to them that if you get more volume you could afford that."

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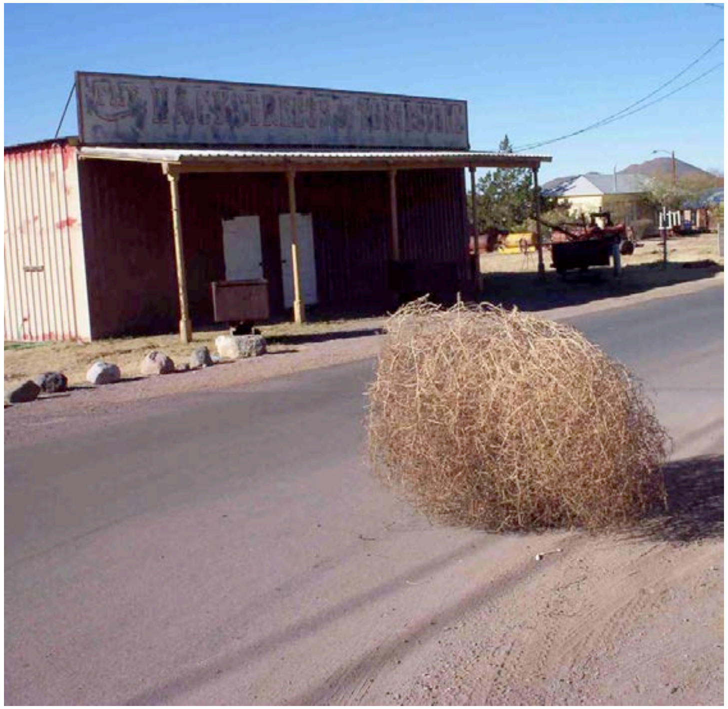
Store Owner Interviews
Preliminary Results - Meat

- Meat - revenue and reputation: "The word of mouth has really…increased our meat sales, they will run to Scottsbluff to Wal-Mart and buy everything except meat and they will come home and buy meat."

Store Owner Interviews
Preliminary Results – Unique Rural Challenges

- Businesses are moving out of rural communities: "I think it's going to get worse. We have three more businesses moving off Main Street [the same street as this store is located]."
- "Used to be full-carts when I worked here in high school and now it's pretty much just fill-in."
- Communities are aging: "Older people are dying. And if there's one parent left, the kids are moving in…It used to be that kids would come home and let the parents basically stay and pass away in their home town. "



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Store Owner Interviews
Preliminary Results – Unique Rural Challenges

- Taxes and government spending contribute to disparities among small towns and big cities: "Omaha and Lincoln still get the majority of all taxes collected."
- Uncertainty for store future: "[The store] was closed for 7 months I think it was. I had sold my own store and retired...but people here started calling me and asking me if I would try to save their store."

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Store Owner Interviews
Preliminary Results - Community

- Community relationships: When asked about what contributes to the success of her store, an employee said it was because her store was "community minded."
- Store serves as community hub: Store focus on offering ready-to-eat items and general household products (store is responsible for catering to all needs of the community)

Store Owner Interviews
Preliminary Results- Distribution

- Distribution Challenges: “[The distributors] hate coming up this way which is exactly why five years ago they came in and said, "Well we will still deliver here, but we're charging 5% more for everything you buy.”…They just said point-blank, "We want to shift our operations. We want the bulk of our operations because that's a bigger population area…And with [distributor] now, they will not take new stores. The minute I dropped my membership to join, there was no going back. I will never be able to become a member again unless I get up to the $50,000 a week plateau. So. Basically it was "We're cuttin' ties" and that bridge is burned.”

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Store Owner Interviews

Preliminary Results- Distribution

- Distribution Challenges: "My bread distribution is out of Alliance and they used to come three times a week and now they only come twice. So I have some definite supply issues there… I'm not saying their service is bad, I mean they still do the best they can but, just not having them here every week, it always, we always seem to be short on something."

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Content Expert Interview
Methods

- Participants
  - 18 experts from across the country
    - Researchers and health promotion professionals that focus on: food access, nutrition, obesity prevention, policy, healthy food retail

Interviews asked experts to describe:

- Their work, which retail venues, rural vs. urban
- The role that corner stores play in the communities they serve
- Measurement tools used
- Best practices and challenges

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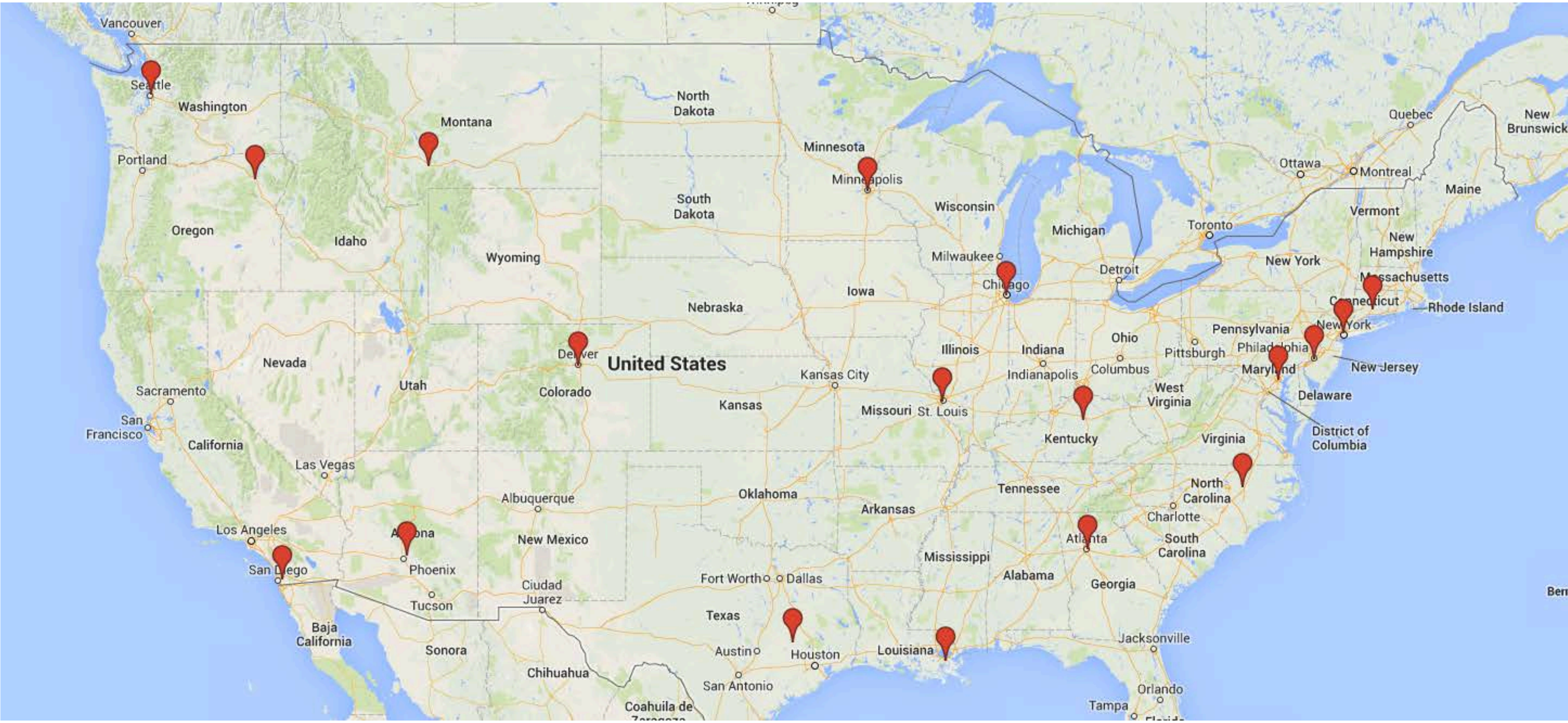
Where are these Content Experts?



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Content Expert Interview
Preliminary Results Specific to Rural

- In many communities the corner store is more heavily utilized (vs. urban)
  - 4X more likely to have food access vs urban
  - Stores willing and able to serve greater variety (consumer demand)
  - Challenge with large box store competitors
  - One expert found that 20% of rural family’s SNAP dollars are spent at small stores

In rural areas, they are critical because that's really the only game in town. It is difficult to blindly go in and document what's there because they will keep things in a back room or under the counter for special customers and those tend to be healthy things.

Content Expert Interview
Preliminary Results Specific to Rural

- Small stores hard to identify in commercial databases because of tax code
  - Gas stations (many are corporately owned)
  - Individually owned small stores have lower access to foods in bulk, yet have more opportunity to be creative
  - Many corner stores consider themselves to be small grocery store → need more research to see how consumers view the stores
  - Establish criteria for categories? ≥ 5 registers, 10 employees = grocery store

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Content Expert Interview
Preliminary Results Specific to Rural

- Small stores in rural areas may be a place where people can connect (social capital)
  - Rural corners stores serve more like a general store, a place where people can meet
  - Prepared foods could be emphasized more in these stores
    - E.g., crock pot of pulled pork sandwich for lunch
- Different shopping patterns for rural consumers
  - Buying in bulk from larger stores
  - Transportation challenges (group shopping)
  - More shelf stable products, lower capacity for fresh items
  - Difficult for smaller stores with limited storage capacity

Content Expert Interview
Preliminary Results Specific to Rural

Distribution

Building consumer demand for healthier

Consistency in measurement for comparisons

Establishing rapport with stores and communities

Understand shopping patterns – shift to local

Thank You

- Amy Yaroch, PhD
- Marcella Miller
- Hollyanne Fricke

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Questions and Discussion?

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