



Short Communication

Small food store retailers' views on healthy food retail policy in response to a local staple foods ordinance

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Abstract

Objective: Our objectives were to explore attitudes regarding food retail policy and government regulation among managers of small food stores and examine whether manager views changed due to the 2014 Minneapolis Staple Foods Ordinance, a city policy requiring retailers to stock specific healthy products.

Design: Manager interviewer-administered surveys were used to assess views on food retail policy four times from 2014 to 2017. We examined baseline views across manager and store and neighbourhood characteristics using cross-sectional regression analyses and examined changes over time using mixed regression models. In 2017, open-ended survey questions asked about manager insights on the Minneapolis Staple Foods Ordinance.

Setting: Minneapolis, MN, where the ordinance was enacted, and St. Paul, MN, a control community, USA.

Participants: Managers from 147 small food retail stores.

Results: At baseline, 48 % of managers were likely to support a policy requiring stores to stock healthy foods/beverages, 67.5 % of managers were likely to support voluntary programmes to help retailers stock healthy foods and 23.7 % agreed government regulation of business is good/necessary. There was a significant increase in overall support for food retail policies and voluntary programmes from 2014 to 2017 ($P < 0.01$); however, neither increase differed by city, suggesting no differential impact from the ordinance. Minneapolis store managers reported some challenges with ordinance compliance and offered suggestions for how local government could provide support.

Conclusions: Findings suggest that managers of small food retail stores are becoming increasingly amenable to healthy food policies; yet, challenges need to be addressed to ensure healthy food is available to all customers.

Keywords
Food retail
Corner stores
Store managers
Policy views

Access to healthy foods is important for the promotion of healthy food choices, yet access remains unequal in the US – both among low-income communities and communities of colour^(1,2). Small food stores, such as corner stores, gas stations and pharmacies, are prominent in these communities, and efforts to increase healthy foods in these venues increasingly recognise store managers as key players^(1,3–5). Numerous voluntary intervention programmes

have aimed to increase the healthfulness of foods available in stores via manager, owner and/or other stakeholder engagement; these demonstrated modest effects on availability and sales of healthy food^(3,5). As store managers and owners play a critical role in the success of these interventions⁽⁴⁾, it is important to understand the perceptions they hold around these and other healthy food retail interventions, including policy. Exploring how amenable managers

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are to various forms of intervention may help inform the types of strategies to consider in improving healthy food access.

To date, limited research has described perspectives that small food retail managers have about healthy food retail programmes and policies. Previous research describing managers' policy perspectives has focused on reactions to federal policy change, including the Supplemental Nutrition Assistance Program and The Special Supplemental Nutrition Program for Women, Infants and Children requirements⁽⁵⁻⁹⁾. Results indicate changes that widen retailers' customer base and increase demand are positively favoured among management⁽⁵⁻⁸⁾. For example, major Women, Infant and Children program policy changes in 2009 were perceived positively by retailers, as use of Women, Infant and Children program benefits is a major source of revenue for many retailers^(5,6,10). However, it remains unclear whether similarly favourable views about policy are held among managers *required* to stock certain healthful products, rather than electing to participate in a programme that can practically assure revenue increases⁽⁶⁾.

The current study examined retailer views about local food policy as part of the STaple Foods ORdinance Evaluation (STORE) study – a natural experiment evaluating impact of the 2014 Minneapolis Staple Foods Ordinance. In 2008, the Minneapolis City Council passed the first ordinance of its kind, which required all grocery-licensed stores to stock staple foods⁽¹¹⁾. In 2014, it was significantly revised to include minimum stocking requirements for ten product categories, such as fruits, vegetables, whole-grain products and low-fat dairy, and quality standards for perishable items⁽¹¹⁾. Despite significant input from retailers in developing ordinance language, STORE study data indicated few stores had yet fully complied with the revised ordinance in the 3 years following implementation⁽¹¹⁾. As such, understanding retailer views about local policy and other policy scenarios could help inform development of future policies to improve the healthfulness of local food retail.

The purpose of this study was to examine views about local food retail policy and government regulation among managers of small food stores. We examined whether views varied by manager, store, neighbourhood and city characteristics and investigated whether manager views changed over time or as a result of the 2014 Staple Food Ordinance. We also explored views specific to the 2014 Ordinance as described by store managers directly affected by the ordinance.

Methods

Study design and population

Data were derived from the STORE study, which collected data over four time points: pre-policy (July–December 2014, time 1) and three post-implementation time points, including September–October 2015 (time 2, implementation only, no enforcement), May–July 2016 (time 3,

initiation of enforcement) and August–December 2017 (time 4, continued monitoring)⁽¹¹⁾. Data were collected from stores in Minneapolis (i.e. where the ordinance was enacted) and in an adjacent city, St. Paul, Minnesota, USA, which served as the study's comparison. The University of Minnesota Institutional Review Board approved this study.

Sampling procedures for STORE have been previously described⁽¹¹⁾. In total, 155 stores participated in the study at one or more time points, of which 54% of stores were in Minneapolis and 46% were in St. Paul. At each time, managers were asked to participate in an interviewer-administered survey. Across four time points, 147 stores had a manager to participate at least once and 57% of these stores were in Minneapolis and 43% were in St. Paul (n 412 observations). The store types that remained in the sample after applying exclusion criteria include pharmacies, convenience or small food stores, gas stations, dollar stores and general merchandisers.

Data collection and measures

Data collection for STORE has been previously described⁽¹¹⁾. In this analysis, we examined three measurement domains – manager characteristics, store and neighbourhood characteristics, and manager views on policy and regulation. Manager characteristics were collected via an interviewer-administered survey, adapted from previous research and piloted prior to data collection (online Supplementary Appendix A). Manager views on local food retail policy and government regulation were also collected via the interviewer-administered survey and were assessed as close-ended questions at time 1–4 and open-ended questions at time 4. Close-ended items measured *support for a stocking policy*, *support for a program to assist stores in providing fresh produce*, and *agreement that government regulation of business is good/needed*^(12,13). Open-ended items included five questions specific to the 2014 Minneapolis Ordinance (online Supplementary Appendix A).

Analysis

Statistical analyses were conducted in SAS (SAS/STAT version 9.4). We first computed descriptive statistics for all manager characteristics across the four time points. Using time 1 data, we computed an unadjusted linear regression model to examine managers' support of food retail policy and government regulation across manager, store and neighbourhood characteristics. We then tested changes in manager views over the four time points across the two cities, by computing mixed model regression analyses adjusting for covariates and repeated measures over time.

We analysed data gathered from time 4 open-ended questions using content analysis techniques. There were fifty-one managers who provided data at time 4 and whose

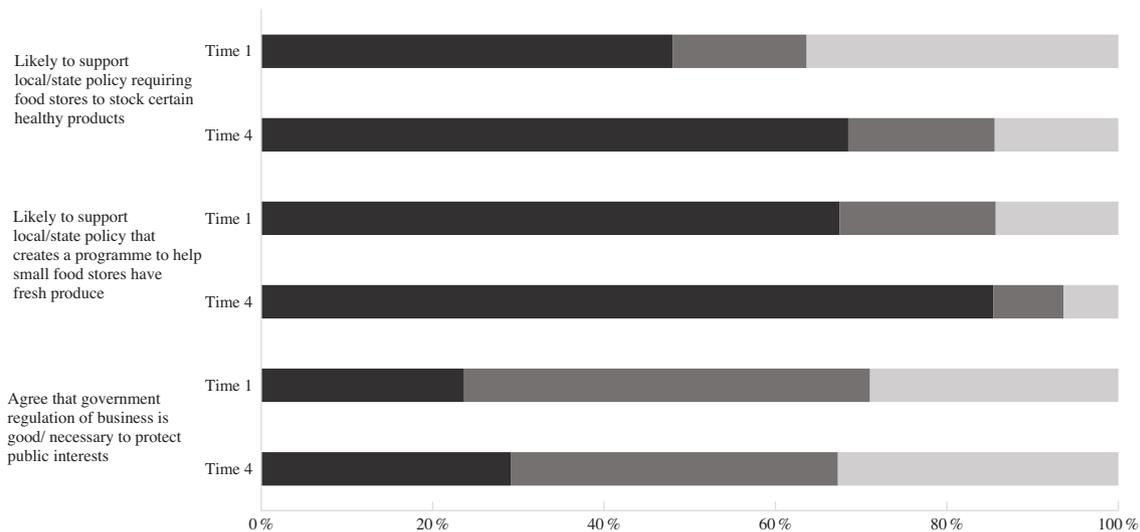


Fig. 1 Managers' views on policy and regulation at time 1 (*n* 78) and time 4 (*n* 112) (unadjusted percentages). ■, Support/agree; ■, Neutral; ■, Unlikely/disagree

stores were affected by the ordinance, that is, those in Minneapolis. We analysed responses from all five items together and coded responses using a data-derived coding system. Following multiple rounds of discussion with three authors (C.M.M., M.R.W., M.N.L.), we organised codes into two overarching categories (*Challenges* and *Proposed Solutions*).

Results

Manager characteristics and views on policy and regulation

Descriptive characteristics of managers across the four time points are in online Supplementary Appendix B. For both support for a stocking policy and support for programmes that assist retailers, half of the managers supported these ideas pre-policy and both increased over time by approximately 20 percentage points (Fig. 1).

Manager views on policy and regulation at time 1 (pre-policy) demonstrated few significant differences across manager and store and neighbourhood characteristics (online Supplementary Appendix C).

Changes in manager views over time

Table 1 presents changes in manager views on policy and government regulation across times 1–4 (2014–2017) in Minneapolis and St. Paul, adjusting for five manager characteristics (gender, US nativity, educational attainment, job title and age) that were shown to significantly differ between cities in bivariate comparisons (four time points collapsed) as covariates. There was a significant increase over time ($P < 0.001$) in support for policies requiring stores to stock healthy products, and though predicted means at times 1, 2 and 3 were higher in Minneapolis compared

with St. Paul, differences by city were non-significant ($P = 0.08$). There was also no differential change in predicted means over time by city ($P = 0.38$), suggesting no impact of the Staple Food Ordinance on manager support for a stocking policy. Similarly, we identified a significant increase over time ($P = 0.006$) in likelihood to support a policy creating programmes to help stores offer fresh produce, but did not identify significant differences by city ($P = 0.27$) or over time by city ($P = 0.24$). Agreement that government regulation of business is good/needed did not demonstrate a significant overall effect over time, by city, or over time by city.

Manager views of the Minneapolis staple food ordinance

Table 2 presents both the *Challenges* and *Proposed Solutions* offered by managers in response to the Minneapolis Ordinance. Several types of challenges were described with regard to ordinance compliance. Of these, food waste and financial burden were the two most prominent. Managers also offered ideas to improve the ordinance and stores' ability to comply. Some proposed distribution-related solutions, like assistance in fostering partnerships with staple food suppliers, farmers' markets and community gardens, whereas others suggested reduced requirements or policy exemptions.

Discussion

The purpose of this study was to examine views about healthy food retail policy and government regulation among managers of small food retail stores. Overall, our findings suggest support for policies requiring stores to stock certain healthy foods significantly increased in recent



Table 1 Impact of Minneapolis Staple Foods Ordinance over time (2014–2017) on adjusted means of manager views regarding policy and government regulation (n 412 observations across 147 stores)*

Outcome	City	Assessment period								Overall effects		
		Time 1, 2014		Time 2, 2015		Time 3, 2016		Time 4, 2017		Main effects		Interaction
		Mean	SE	Mean	SE	Mean	SE	Mean	SE	Time	City	Time × City
Likelihood to support stocking policy 1 = Very Unlikely 5 = Very Likely	Minneapolis	3.4	0.3	4.1	0.2	4.1	0.1	4.0	0.2	<0.001	0.08	0.38
	St. Paul	3.2	0.3	3.5	0.2	3.9	0.1	4.0	0.2			
	<i>P</i> -net	–		0.38		0.90		0.68				
Likelihood to support programme to help stores have produce 1 = Very Unlikely 5 = Very Likely	Minneapolis	3.9	0.2	4.2	0.1	4.2	0.1	4.3	0.1	0.006	0.27	0.24
	St. Paul	3.7	0.2	4.0	0.2	4.4	0.1	4.1	0.1			
	<i>P</i> -net	–		0.79		0.39		0.55				
Government regulation of business is good/needed 1 = Strongly disagree 5 = Strongly agree	Minneapolis	2.8	0.2	2.9	0.1	2.8	0.1	3.0	0.2	0.91	0.17	0.12
	St. Paul	2.8	0.2	2.8	0.1	2.8	0.1	2.5	0.1			
	<i>P</i> -net	–		0.47		0.90		0.06				

*Linear regression model adjusted for repeated measures over time and for manager gender, US nativity, educational attainment, job title and age (covariates that were significantly associated with city in bivariate analyses); *P*-net values refer to changes in time × city effect from time 1 to time 2, time 1 to time 3, and time 1 to time 4, respectively.

years among managers in Minneapolis/St. Paul. We identified only a few differences in manager views about food retail policies by manager- and store-level characteristics. Despite managers increasing support for food retail policies, those who were directly affected by the 2014 Minneapolis Staple Food Ordinance still expressed several challenges.

We found manager support for policies requiring stores to stock healthy foods and beverages significantly increased over time and did not differ across cities. This suggests that managers of small food retail stores are increasingly amenable to policy and may be increasingly interested in offering healthier products to customers. However, these increases do not appear to be due to the 2014 Minneapolis Staple Food Ordinance, unless an effect in Minneapolis spilled over to St. Paul. These results are also consistent with literature on other policies, such as smoke-free laws, which suggest support for policy banning smoking increased after policy implementation^(14–16). Overall, this support among managers is encouraging, as previous work indicates that having strong, or even moderate, owner support of a programme to increase stocking of healthy products can increase likelihood of success in changing and sustaining stocking practices⁽¹⁷⁾.

Open-ended responses indicated managers were concerned with a range of challenges about maintaining stock and customer demand. This is consistent with other literature on food retailers, in which managers have expressed concern about stocking healthier food because of low consumer demand, spoilage and lack of profitability^(18–22). While many managers indicated support for retail food policy overall, Minneapolis managers were divided on whether they believed the Minneapolis Staple Foods Ordinance would increase sales of staple foods in their store, which may have been shaped by their perceived challenges.

Despite this study building upon a large body of literature on small food retail and expanding knowledge on managers' perceptions of retail food policy, several limitations must be considered. Our study included managers from the same store over time; however, in this process, we often encountered different managers in any given store over time. Other limitations are that data were derived from stores in only one geographic area and in response to a single policy intervention. However, a major strength is that we used longitudinal data to explore explicit policy questions with managers of small food stores during a time of major changes in US federal administration and turmoil over government regulation and public health policy^(23,24). In addition, while open-ended responses were brief and hand-recorded by surveyors, they helped illuminate the manager experiences and can help inform future efforts to improve the success of similar local food policies. Many factors, including store type, current manager stocking practices and perceived customer demand, may influence manager attitudes towards policy and should be

Table 2 Types of challenges and suggestions for future action described by managers about the Minneapolis staple foods ordinance at time 4 (*n* 51, 2017, Minneapolis, MN, USA retailers only)*

	Description	Data sample
Challenges		
Food waste (<i>n</i> 15, 29 %)	Expressed concern about food waste or spoiling of fresh and canned products	'The only problem is that no one's buying. [The required items] are expiring.'
Financial burden (<i>n</i> 12, 24 %)	Concerned the ordinance will cause financial hardship due to lack of affordability of staple foods from vendors or food waste	'[The ordinance is] not feasible, unreasonable to force us to carry these products. Creates a financial burden for the store that is not benefiting the community . . .'
Stocking (<i>n</i> 10, 20 %)	Difficulties in maintaining stock due to shelving space, storage or coolers	'Sometimes it's hard to maintain stock of staple items . . . hard to keep up storage.'
Enforcement challenges (<i>n</i> 9, 18 %)	Disputes or concerns encountered with ordinance enforcement	'They come in and make sure we have food Minneapolis wants . . . They came in and told us you need more orange juice and beans. We had sold the oranges. She was serious and we was like "what?!"'
Policy overreaching (<i>n</i> 7, 14 %)	Expressed that the ordinance is not necessary or lack of need for staple food items among customers	'Overly targeted to certain types [of stores]-if you really want to help go across street to dollar store.'
Competition (<i>n</i> 5, 10 %)	Concerns about competing stores which offer staple foods	Response to question asking if the policy will result in more staple foods being bought in small food stores: 'No, not in my neighborhood. There is already a grocery store and farmer's market nearby.'
Proposed solutions		
Distribution (<i>n</i> 15, 29 %)	Solutions related to distribution, including partnerships, financial assistance and farmers markets	'Need to help smaller stores who have trouble obtaining the products. Give them source suppliers.'
Exemptions/reducing requirements (<i>n</i> 10, 20 %)	Discussion of proposed exemptions due to specific circumstances or ways to improve the ordinance requirements to be more feasible for stores to comply	'If you are in a two-block radius of [large grocery retailer] or other store with fresh and cheap products, don't need to comply.'
Big Government (<i>n</i> 9, 18 %)	Ways to improve staple food item sales or ordinance with larger state or federal government intervention	'[The government] should go after the food companies, have them put more healthy things in the food. People wouldn't have a choice then.'
Education/create customer demand (<i>n</i> 8, 16 %)	Ways to improve promotion of staple foods by targeting customers and increasing knowledge within the community and among retailers	'City advertise to public that healthy food is at convenience stores. Educate public.'
Increase enforcement (<i>n</i> 3, 6 %)	Suggestions related to increasing enforcement	'The city could do more inspections. They don't show up as often as I feel they should.'

*Challenges and proposed solutions are listed in order by the number of managers citing each. We also examined responses to identify whether managers did or did not think the ordinance would result in more customers buying staple food items at their stores. Out of fifty-one managers, 22 (43 %) provided a response that indicated they thought the ordinance would result in more customers buying staple food items at their stores, 22 (43 %) did not think this would occur, and 7 (14 %) were unsure.



examined in future studies to understand changes in increasing support over time.

Conclusion

Our findings suggest many managers support policies requiring stores to stock healthy foods, but challenges remain in implementing such policies. Although Minneapolis was the first and remains one of the only cities to adopt such a policy, understanding these challenges and managers' perspectives has national implications, as the Staple Food Ordinance has received considerable attention and has been considered by other localities^(25,26). Lessons learned through our evaluation of the Minneapolis Staple Foods Ordinance will be useful in developing and implementing future ordinances and other programmes which have the potential to improve both the nutritional quality of foods offered and purchased from small retail stores.

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plan, analysing data and manuscript revision. L.H.: formulating the research question(s), formulating the analysis plan, designing the study and manuscript revision. D.J.E.: formulating the research question(s), formulating the analysis plan, designing the study and manuscript revision. M.N.L.: formulating the research question(s), formulating the analysis plan, analysing data, designing the study and manuscript revision. *Ethics of human subject participation:* This study was conducted according to the guidelines laid down in the Declaration of Helsinki, and all procedures involving study participants were approved by The University of Minnesota Institutional Review Board. Verbal informed consent was obtained from all subjects. Verbal consent was witnessed and formally recorded.

Supplementary material

For supplementary material accompanying this paper visit <https://doi.org/10.1017/S1368980020000580>

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