April 2021

Food retail managers' perspectives of in-store health interventions in disadvantaged areas: a qualitative study

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Abstract

Background

Non-communicable diseases (NCDs) are increasing throughout the world and are estimated to cause 90% of all deaths in Sweden. Non-European immigrants have a two-fold risk of developing NCDs and suburbs with higher proportion of immigrants have a higher prevalence of these diseases. Food retail is in a unique position to deliver interventions that can influence healthier eating behavior since it is the setting where most of the food is procured. A key factor in the future success of health interventions in food retail stores is support of managers, but studies from their perspective are lacking.

Methods

Nine in-depth interviews were conducted, among two categories of participants: Managers of food retail stores in socio-disadvantaged areas, referred as store managers, and Dieticians working with health issues within food retail referred as health managers. Thematic analysis was conducted to analyze the transcripts.

Results

The analysis resulted in two main themes: *Constrained by reality* and *Reframing responsibilities*. Store managers felt reluctance to initiate health interventions due to lack of health awareness and interest among their customers. Health managers were involved in many national health promotion activities, but stressed the need for local initiatives if health interventions were to be successful. Both store and health managers thought government should take more actions and set defined health regulations for them to follow.

Conclusion

Food retailer managers did not perceive themselves as initiators of health interventions as a part of business practice and identified structural barriers that hinder in-store health initiatives. A shared belief was the need for a structural approach for improving public health, including a governmental responsibility to improve health in disadvantaged areas and clear regulations to influence public health.

Keywords:

Food retail managers, health managers, store managers, health interventions, disadvantaged suburbs, in-depth interviews, prevention of non-communicable disease, environmental health.

Background

Non-communicable diseases (NCDs) such as type-2 diabetes (T2D), cancers and cardiovascular diseases are increasing throughout the world. Two of the behavioural risk factors for NCDs included in WHO's 5x5 framework are food-related, namely unhealthy diet and harmful use of alcohol (World Health Organisation, 2019). In Sweden, 90% of all deaths are estimated to be due to NCDs (World Health Organization, 2018). While overall health in Sweden is improving, health inequalities between socioeconomic and other vulnerable groups are increasing (Swedish Public Health Agency, 2019). Immigrants from non-European countries have a two-fold higher prevalence of developing T2D than Swedish born population (Swedish Public Health Agency, 2019) (Wändell, Wajngot, de Fairue, & Hellenius, 2007). Many host countries, including Sweden, observed a change in the dietary patterns of refugees following migration (Koochek, o.a., 2011), one of the risk factors of developing NCDs among immigrants (Stanner, 2011). Acculturation means adoption to the host countries practices (Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006) and diet acculturation has been positively related to T2D (Venkatesh, Conner, Song, Olson, & Weatherspoon, 2017). The higher prevalence of T2D among the immigrant population is suggested to be explained by acculturation (Sanou, o.a., 2014) (Wändell, Wajngot, de Fairue, & Hellenius, 2007). The food retail sector, here referring to individual retail food stores and head office of food retail, plays an important role in improving eating behavior (Swedish Public Health Authority & Swedish National Food Agency, 2017).

Food retail is in a unique position to deliver interventions that combine product placements, advertisements and price strategies (Swedish Public Health Authority & Swedish National Food Agency, 2017). Today, public health is included in the corporate social responsibility work of Swedish food retailers (Swedish Public Health Authority & Swedish National Food Agency, 2017) but a critical concern for interventions is the support of individual food stores (Swedish National Food Agency, 2015). Voluntary actions can be seen as a cost-effective and a quick solution for improving healthier eating habits (UK Department of Health, 2011), but stakeholder management and motivation for food stores have been identified as requirements for further success (Abdulfatah & Jørgen, 2016). The Swedish food supply chain has shown a willingness to encourage private initiatives improving health in Sweden (Swedish National Food Agency, 2015) and there is also an interest to incorporate health-oriented activities within store. However, retail federations have expressed a need of national health goals and efforts in order to take further actions in their already ongoing health work (Bergström, Lynch, Rahman, & Schäfer Elinder, 2017). A key factor in the future success of health interventions in food retail stores is support of store managers, but studies from their perspective are lacking. Therefore, there is a need for participatory research with the target population and relevant stakeholders in a real-life setting (Sanou, o.a., 2014) to increase understanding of how they can support immigrants in achieving a healthy transition following migration.

This study aims to increase understanding of the role of food retails stores in NCD-related health interventions in disadvantaged suburbs in Stockholm through the eyes of food retail managers. Two research questions were investigated:

1. What are food retail managers' attitudes toward health interventions in food retail stores?
2. How do they perceive in-store health interventions in disadvantaged suburbs?

Method

This study was conducted as part of the formative phase of the SMART2D project (Self-management and reciprocal learning for Type 2 Diabetes) that aimed to develop and implement a self-management support intervention for T2D in Sweden, South Africa and Uganda (Guwatudde, o.a., 2018). This study was conducted in the Swedish arm of the project in socio-economically disadvantaged suburbs in Stockholm.

Health interventions in the food retail sector are often a part of companies' corporate social responsibility (CSR) (Swedish Public Health Authority & Swedish National Food Agency, 2017). Globally, supermarkets are undertaking many CSR commitments and a few supermarkets have the possibility of positively influencing public health, though more efforts could be done (Pulker, Trapp, Scott, & Pollard, 2018). Carroll's three-domain approach is a useful model for understanding CSR activities in terms of the legal, ethical and economical motives (Schwartz & Carroll, 2003) (Daft & Marcic, 2009). This approach visualizes these three motives in a non-hierarchal manner with overlapping and intersecting circles creating seven categories that describe how CSR can be conceptualized, analyzed and illustrated (Schwartz & Carroll, 2003). This model was used throughout this study from the development of the tool (interview guide) to the interpretation of data and the results as a guiding map to assure all aspects of the CSR-action to be included.

Setting

The food retail stores from which the store managers were recruited were located in two socio-disadvantaged areas in the Stockholm municipality within Region Stockholm. The study settings were characterized by high unemployment rates, low-income levels and a high proportion of immigrants (>30%) (Guwatudde, o.a., 2018) (Daivadanam, Mölsted Alvesson, Aweko, Al-Murani, & Peterson, 2015). The stores were categorized by size using a classifications system for food retailers included in the EPOCH (Environmental Profile of Community's Health) tool (Chow, o.a., 2010) (Spires, o.a., 2020). Stores classified as supermarkets and small independent grocers were included in the sample, i.e., they offered all the necessary ingredients to prepare a regular meal. Vendors classified as convenience stores, informal vendors, mobile vendors and markets were excluded (i.e. that could not offer all necessary ingredients for a full meal).

Study design and participant selection

We conducted a qualitative study using in-depth interviews. Purposive sampling was used to identify two categories of participants: 1) Managers of food retail stores in the study sites hereafter referred to as store managers, and 2) Dieticians working with health issues within food retail hereafter referred to as health managers. The latter category included health managers from local stores as well as from the head offices of major supermarket chains and federations. The two different participant groups were chosen to gain a holistic perspective on how health issues are considered in the food retail sector and to cover all three motives represented in the CSR model (Schwartz & Carroll, 2003). Legal issues, for example were better discussed with health managers, particularly those from the head offices and federations who regularly dealt with such issues.

Once the food stores were identified, 25 store managers were contacted directly at the store or through an information letter given to a co-worker. The first author (AJ) called the manager a few days later, asking about their interest and willingness to participate in an interview. Health managers within food retail were identified through snowballing. Six store managers and three health managers consented to participate in the study. As the number of store and health manager positions in major food retail stores in Stockholm municipality are limited, we are unable to provide more details here in order to preserve their anonymity.

Data Collection

Two interview guides were designed for store managers and health managers with some differences between them. The guide for store managers focused on the practical implications of health interventions in food retail stores and covered the economic and ethical considerations concerning health through the following three themes: *customer behavior, influencing healthy shopping behavior* and *limitations and opportunities for influencing healthy shopping behaviour especially for immigrants.* The guide for health managers was aimed towards the general implications of health

interventions in food retail stores and covered legal aspects concerning health through three themes: *the company's work with health issues*, *legal implications of health interventions and communication* and *health interventions to support immigrants (Appendix)*. The interview guide was pilot tested in two interviews and changes were made before the study was conducted. The pilot interviews were not included in the analysis.

The semi-structured interviews were performed with inspiration from Kvale (2007) and included open-ended questions. Interviews were conducted from March 5th to April 11th 2018 in Swedish and lasted 42 to 67 minutes. The location of the interviews was based on each participant's choice and most were conducted in the interviewees' office, except one, which was held at a café. The interviews were conducted by the first author (AJ) who has a bachelor's degree as a food service dietician and four years of experience working in food retail stores in a neighbouring region.

Data Analysis

The interviews were audio-recorded and transcribed verbatim and read multiple times before analysis. The unit of analysis was each interview and all data were included in the analysis. We conducted thematic analysis following Braun and Clarke (2006) in two steps. First, data were coded using Nvivo (version 12). Open coding was initiated with a data-driven approach. Through discussions with MD, the first draft of codes was finalized to generate a thematic map. In the second step, JS re-read the transcribed interviews and re-coded and re-analyzed parts of the data to check for consistency and agreement with AJ. The thematic map was updated with the final set of codes and further condensed into categories, sub-themes and themes. The results were mapped to a three-level table and further refined and finalized through discussions between the authors.

Results

Two main themes emerged from the analysis: *Constrained by reality* and *Reframing responsibilities*. The results are summarized in table 1 and described in the text that follows with quotations from health or store managers to illustrate a point. The participants are numbered in chronological order representing store managers (SM1, SM2, etc.) and health managers (HM1, HM2, etc.).

Table 1. Results of the thematic analysis

Category	Sub-theme	Theme
Information in different formats to increase health awareness	Social structures define boundaries of influence	Constrained by reality
People in disadvantaged areas have limitations that we cannot address		
Healthy food is segmented		
Retail is a business, responsive to demands	Free market rules apply	
Conflicting accountability to human health		
The product development is the way to go	The food manufacturing industry is a major driver of health	Reframing responsibilities
Industry as a cause of ill health		
Governmental actors have the primary responsibility for health	Reliance on regulations for health promotion	
Clear health regulations simplify retail work		

Theme 1: Constrained by reality

The first theme consists of two sub-themes: Social structures define boundaries of influence and Free market rules apply. Together they represent the conflicts and realities as perceived by store and health managers with respect to in-store health-related activities.

Social structures define boundaries of influence

An overall concern when talking about in-store health interventions was the need for increased information and knowledge of how to eat healthily. Informative posters in the store were not found to be effective. Instead, the managers felt it was important to find ways to convey explanations and options that customers would understand.

> …we should present the healthier option right next to what people often buy, provide enough information that is needed, the benefits, explain what would happen if you choose this food product instead, try to clarify. With this, offering such opportunities to choose, we can influence in the long term. [SM3]

Yet there were differences in the type of information that health or store managers felt was important to convey to customers. The green keyhole was a clear example. The green keyhole is a food label used in Sweden, Denmark, Norway and Iceland to identify healthier food products within a product group (The Swedish National Food Agency, 2021) and was the top agenda for health managers who talked in-depth about its marketing and strict implementation criteria. They believed in the concept and wanted people to become more aware of it and felt strongly that it should be a top priority for the National Food Agency. The store managers saw such symbols as a good way of sorting out products and informing customers about healthy food items. However, they felt that it was not widely used and its existence and meaning were barely known among customers and even among some of the store managers. Both groups of managers perceived information needs as being different for different population groups depending on their education, socio-economic status and existing food habits. They perceived food habits as predominantly unhealthy in many of the disadvantaged suburbs and agreed that symbols such as the green keyhole could be useful since language comprehension was seen as a barrier to any communication.

> To inform, to inform, it is a work we always have to do. Both industry, retail and the “owner” of the keyhole. [HM1]

Cultural diversity and a lack of health awareness in persons living in disadvantaged areas was seen as a limitation and health was not perceived as a high priority for the customers. Due to a number of factors, including language comprehension, cultural differences, lack of financial resources and low educational background, populations in disadvantaged areas were not often perceived as an ideal target group for in-store health interventions. This seemed to create a sense of resistance among store managers as these limitations, coupled with their perception of 'generally unhealthy eating habits,' was considered as a major barrier to influencing their customers towards healthier buying patterns.

> Well, they (immigrants) have a different culture, talking about sweets and such, they include it more in their culture. The food is also another concern when socializing. You see a lot of that in this neighbourhood, a whole raft of families having meetups in the summer, with the food at the centre of the whole activity. [SM5]

Seen from the health managers’ perspective, an important factor for interventions to be successful is that it be contextualized, i.e., adjusted to the needs of the target population. This was a dilemma since projects proposed by the head office would have to apply to a majority of their customers, which

would generally exclude immigrants in disadvantaged areas. The health managers felt that it was beyond their role to tackle this issue and it was rather the responsibility of the local communities. Additionally, healthy food products were seen as segmented between disadvantaged areas and others in terms of their market share. The store managers stressed that suppliers were not interested in having store-based activities focusing on healthy food items in disadvantaged areas due to the perceived lack of interest and knowledge, together with the question of price and affordability. The price of products was often described as the biggest concern for customers and therefore the main factor influencing their purchases; the managers suggested creating a segmented market for healthy products among persons with better purchasing power. It becomes an issue of which stores have which products i.e., where to find a particularly healthy food option and which food stores are promoting them or which healthy food option is available in a particular store.

> People are starting to be concerned about it (health), but not really in disadvantaged areas, more in the city centre where you will have enough money for it. [SM1]

Free market rules apply

Being concerned with health was described as being bad for business by store managers due to the differing price of items in the unhealthy and healthy food categories. Since the food store has to cater to customer demand, store managers explained that unhealthy products had a greater appeal for spontaneous purchases, which in turn increased in-store sales. They saw a possibility for healthy foods to follow the same path as organic and lactose-free assortments, i.e., first customers demand the products, then industry starts to increase their manufacturing portfolio in the category attracting a greater selection of customers, so prices go down and sales increase. Health was therefore seen from a store manager perspective as a demand and supply concern that follows free-market rules.

> I would say it's a conflict of interest here. We have, it's our interest to sell many, unhealthy food items. Partly, some categories. Like, if we talk about candy, which is a very profitable group of products in our business. And then we want to sell more of that because we earn more money on it. Comparing to another option. Like, what would we gain from that in this business? It's something like that if we provide this item which sells a lot, and we know that if we highlight these in a campaign then we know we will attract customers to the stores and sell plenty of this item. Then, why should we change that, when it's a great concept? That is the challenge, why change that, when it works? [SM4]

Health managers agreed that more could perhaps be done in disadvantaged areas, especially with their own branded category of foreign foods, as there has been no attempt so far to accrediting them using the green keyhole or any other symbol. Both categories of managers observed health as a growing trend overall in society, but not so much in disadvantaged areas; and they had different reactions to it. Health managers saw a potential for increased interaction with immigrant customers to understand their needs and support the stores with usable information, while store managers felt that a good business strategy reacts to market demands rather than trying to instigate a change. The bottom line was that a low demand for healthy food items in the disadvantaged areas meant that stores could not supply it.

> We, who work with communication and the others with the assortment, we have to search for the knowledge ourselves. To be more aware of what our customers request, from what kind of food culture they come from. So, I

> believe it´s about learning more. But also providing what the retail stores need to be able to communicate in the right way. [HM2]

> I do not feel the need to raise awareness in the customers. We have been trying to do that over the years, to take a stand on different things, which has not always been good for business. [SM2]

With regards to health interventions in retail stores, deliberations from store managers were often about how their business depended on supplying customers´ demands and expressed a natural reluctance with forcing customers to make particular choices. They perceived health interventions as forcing a change that affects customer behaviour, which they strongly felt was beyond their responsibility. It was the customer who was and should be in control of choosing from among the assortment of goods available and the retail store cannot and perhaps should not, meddle with that process.

> Well, I consider us to be, like, we just retail food to the population so to speak. So, it´s the consumers who are choosing in the store. They have the opportunity to make the right decision. [SM4]

However, when asked about retail stores using product placement and price strategies to influence customers, it was explained as an effective in-store tool that would help a customer in selecting a food item. It did not include qualifying a food as healthy or not, which they clarified was beyond their role.

There was an obvious disconnect between health and store managers perceptions and understanding of health promotion. The store managers perceived themselves as having a role in health interventions only if it was aligned with their business strategy, and the customers or the manufacturing industry instigated this through increased demand and supply. They were open for change but could not see themselves as being the instigators of the change. Health managers, on the other hand, expressed a greater feeling of responsibility for health, exemplified by the projects they were involved in. Most apparent was the ongoing work at the head office and agreement at branch offices to promote health in the food retail sector. They saw health interventions as a response to the societal trends of increased obesity and diet-related NCDs and this included formulating their own branded products according to Green Keyhole guidelines, which means meeting criteria of less salt and sugar, more fibre and whole grain and healthier or less fat than food products of the same type not carrying the keyhole (The Swedish National Food Agency, 2021). In addition, inspiring customers through healthy recipes and advice in magazines, leaflets and social media was also a part of their health work. However, the fact that running a business was not fully aligned with promoting health, has been a recurring concern among the interviewees.

Theme 2: Reframing responsibilities

The second theme also consists of two sub-themes: The food manufacturing industry is a major driver of health and Regulations are needed for health promotion. These represent the inherent dilemma of who is to blame, versus who is responsible, from the perspective of the store and health managers.

The food manufacturing industry is a major driver of health

According to store managers the food industry is one of the biggest actors when we consider diet-related NCDs. They explained that health interventions should primarily be a concern for the food manufacturing industry since they provide the food products and will, therefore, have more say in how to improve the composition of the food products. They believed that the manufacturing industry had a duty to develop healthier products to enable people to eat healthier.

> I do not know what we can do to decrease the risk (of developing type 2 diabetes). We are just retailers, we are not the manufacturers. We just purchase pre-packaged items, where you can read the table of contents. So that is more a question for the manufacturers... - [SM3]

The composition of a product itself was seen as a big part of the problem of diet-related NCDs, hence the importance of going back to the source of it all, i.e., the retail stores are just the providers of products. Sugar for example is a commodity that is purchased cheaply and sold expensively, with products having a high sugar content being sold at a good profit. With regards to their own branded products, the health managers participated in a voluntary branch project that aimed to lower the salt content in food products using innovative technological solutions. They explained the necessity of decreasing salt content without affecting other properties such as the taste, texture or shelf-life since that may adversely affect consumers' brand loyalty.

The food manufacturing industry generally uses free tastings as an essential part of their market strategy when introducing new products into the market. From a retail perspective, having free tastings in-store was seen as an effective tool to influence customers in trying new foods, which could also potentially work for healthier products.

> They would then get the possibility to, you know, the ones who would never buy a product before tasting it, yeah. Getting the opportunity, take a stand on if they want to pay for it or not...perhaps that could be something...[SM5]

Reliance on regulations for health promotion

Overall, health managers insisted that governmental actors such as the National Food Agency (Livsmedelsverket) and the Public Health Agency (Folkhälsomyndigheten) have the primary responsibility for the population's health and should make it easier for other actors such as food retail stores to contribute to health-related work. The National Food Agency, for example, was seen as the responsible public body for promoting the Green Keyhole label while the Swedish Migration Agency (Migrationsverket) and local municipalities and citizen's offices (Medborgarkontor) could be involved in working with immigrants about healthier eating habits.

> If the goal was known, it would then be much easier for us to inform forward down to the companies; the dietitians could talk with the marketers and inform the goal. Then they can ask, how can we reach that? But now the others ask why? Why do we have to do that? How will that benefit us? [HM1]

The lack of regulations was seen as limiting their motivation to improve health from a food retailer perspective. Both health and store managers felt comfortable with following health regulations and the latter even expressed a necessity for clear regulations with respect to health interventions for them to be effective. For example, there is no regulation with respect to age verification for energy drinks, only a recommendation, so it is up to each store manager to follow them or not. The store managers felt that the government should have clear regulations, rather than passing off this responsibility of interpreting the guidelines to others to do as they see fit. Clear regulations, they said made their work easier.

> But, but yes. The responsibility should not be of each store owner. The store should kind of, hold on to the existing law… It is much easier just following the law… - [SM5]

Health managers were also positive about possible future health regulations, citing examples from existing global Sustainable Development Goals (SDGs), which simplified their work. However, health

goals should not be too precise as they felt that the responsibility on how to reach the goals should be left to the food retail sector. The current regulations regarding health claims, for example, were given as a bad example since they were not considered consumer friendly. Specifically, they discussed the EU health and nutritional legislation (1924/2006) together with the EU information legislation (1169/2011), which were seen by the health managers as limiting the food sector from accurately informing the consumer about the health benefits of products. They believed that the purpose of the legislations was good, i.e., to control the information on packaged food products and avoid misinformation to consumers, but they felt that it seriously limited their ability to promote the health benefits of products in a way that customers would understand. These legislations were described as the biggest hindrance in their efforts to guide consumers on how to eat healthier.

> Something which is limiting us is the nutritional health claim regulation, No. 1924/2006. Regarding not being able to say anything (about a product's health benefits), because we are controlled by this EU regulation. We can't say anything about it, even though it's good. Because then we have this regulation, which does not allow us to do that. [HM2]

Altogether the findings show a reliance on regulations to influence public health and strong pointers to the government of taking the next step in health promotion.

Discussion

Research from Nordic countries about health interventions in the food retail sector is limited and studies about health inequality are insufficient (Bergström, Lynch, Rahman, & Schäfer Elinder, 2017). Food retail stores in socioeconomically disadvantaged and immigrant-dense suburbs could be a possible arena for supporting a healthy transition following migration. This paper provides insights on the perceptions of store and health managers integral to this process.

From the perspective of store managers, health interventions were not seen as enhancing their profit or share value since there was no customer demand for it in their area. This view is also shared by the Swedish food supply associations, which also saw no profitability in health interventions and wanted the government to create public opinion and demand for healthier food options (Swedish Public Health Authority & Swedish National Food Agency, 2017). For health managers, health was central to their profession and their role was to be a part of health interventions. But they required motivators in the form of national goals from the government to incorporate it further. This is supported by conclusions from the National Food Agency in Sweden that places emphasis on a national objective for health goals, together with support from several actors (Swedish Public Health Authority & Swedish National Food Agency, 2017).

There was a strong belief that the food industry has a leading part in future health work as they influence the composition of food products. A literature review concluded that reformulation of food products for a healthier composition can lead to healthier diet (Swedish Public Health Authority & Swedish National Food Agency, 2017). Store managers focused on sugar content and health managers used the Green Keyhole as guideline for a healthy composition, together with a voluntary branch project for salt reduction. High salt intake itself constitutes the biggest causal factor of diet-related illness in Sweden (Forouzanfar, o.a., 2016) and many countries nationwide have salt reduction regulations (Reeve & Magnusson, 2014) (Trusková, 2016). The managers also highlighted the opportunity of further product development of foreign food among the branded products, that they also meet the Green Hole criteria. Since there is a positive association between an unhealthy diet and diet acculturation among immigrants, it is important for foreign foods too be included in future regulations and health improvements of food composition. Reviews also show lack of availability and accessibility to traditional foods are important barriers to healthy eating (Sanou, o.a., 2014), which

could be counteracted by healthier food options among foreign foods in branded products. This may also influence the affordability of these foods.

Structural barriers such as limited economic, educational, and cultural resources of the customers was thought by managers to hinder health initiatives in the examined food retails stores. This has also been found in a review about acculturation and immigrants showing low socio-economic status to influence adherence for a healthy transition among immigrants (Sanou, o.a., 2014). This aligns with results from a systematic review of barriers and facilitators for the implementation of healthy food-store interventions, where consumer characteristics were observed to be a barrier for the retail managers in health interventions (Middel, Schuitmaker-Warnaar, Mackenbach, & Broerse, 2019); the review also found that consumers' interest in health was seen as a prerequisite for effective health promotion, which supports store managers' perception in this study.

There are other motives for a CSR-action, namely economic, legal and ethical. Store managers lacked both direct and indirect economic motives for health interventions within their store because of a presumption of no customer demand. The existence of dietitians working as health managers in the head offices shows an overall indirect economic motive for working with health in the food retail sector. As for legal motives it is clear that the dominant motive is compliance and reliance on following regulations and asking for more legislation concerning public health, which would be opportunistic types of compliance with the law. This is supported by the fact that Sweden ranks at the top in the World Justice Project Rule of Law Index (The World Justice Project (WJP), 2020) meaning a great adherence to legislations. This shows a possibility of positive reception for future public health legislations and goals. On the other hand, health managers felt restrained by the legislation of health claims that fall into restrictive compliance with the law. Lastly, a CSR action can often include ethical motives, but a valid interpretation of respondents' real motives could not be concluded in this study. However, it can be hypothesized that health managers include ethical motives within their work as their profession and education as dietitians include improving health in society.

Strengths and limitations

A major strength of the study is the variation of respondents covering different types and levels of stores and managers, which together with the narrow focus on stores in disadvantaged areas showed recurrent key issues. Another strength was the use of the model inspired by Carrols three intersecting circles of CSR since it assured that all aspects were covered in the interview guides and interpretation of the results. The major limitation in this study is the limited number of respondents, which affects the interpretation of the findings and that they may not apply in all settings.

Implications

As the findings reveal positive attitudes for further health regulations, it shows a promising prospect for legislative changes. Conversely, today's regulations about health claims are seen to hinder further voluntary actions to guide consumers towards healthier eating. Is it possible to create regulations which both are welcomed by the food retail sector and provides the best possible effect for public health? Future studies on the formulation of regulations, their effect and their consequences are needed, from a health economic approach. In addition, research is needed to explore the structural barriers that limit the effect of health interventions in disadvantaged areas. Local adaptions for health interventions have shown to be a key for it to be both effectual and lower the risk of health inequality (Carey, Crammond, & De Leeuwe, 2015). Carey et. al propose using proportionate universalism in health interventions, meaning universal attempts are used but with a local adjustment in proportion for the target population and area. Further studies on ideal target groups and stakeholders in this area would be beneficial, as our study shows the reluctance from both store and health managers to be stakeholders in this issue.

Conclusion

Food retailers did not perceive themselves as initiators of health interventions as a part of business practice and identified structural barriers that hinder in-store health initiatives. A shared belief was the need for a structural approach for improving public health, including a governmental responsibility to improve health in disadvantaged areas and clear regulations to influence public health.

Abbreviations

NCD: Non-communicable diseases

T2D: Type-2 diabetes

WHO: World Health Organization

Smart2D: Self-management and reciprocal learning for Type 2 Diabetes

CSR: Corporate Social Responsibility

The Keyhole: A food label that identifies healthier food products within a product group using criteria's based on Nordic Nutrition recommendations specified by the authorities in Sweden, Denmark, Norway and Iceland.

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Declarations

Ethics approval and consent to participate

All participants gave informed consent both orally and in writing before the interviews were conducted. Ethical approval for the study was obtained from the Stockholm Regional Ethics Review Board (Ref No 2018/239-32/1). The study was conducted in accordance with the ethical guidelines and regulations of the Stockholm's Regional Ethics Review Board from where the ethical approval was obtained.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request

Competing interests
The authors declare that they have no competing interests.

Funding
Not applicable

Authors' contributions
AJ coordinated the study, completed the analyses and led the manuscript writing. MD supervised the study, provided interpretation of data, and critically revised the manuscript. JS re-analyzed and re-coded parts of the data to check consistency. All authors read and approved the final manuscript.

Acknowledgements
Thanks to Mathilde Sengoelge for help with language editing and critical review of the manuscript.