

**Factors influencing (barriers and promoters) the stocking, promotion and pricing of 'healthy' foods by small store owners in Eastern Porirua, Wellington.**

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# **Abstract**

## **Introduction**

Ways to influence the quality of the 'in store' food environment in low income neighbourhoods have been increasingly studied in an effort to identify methods of modifying the food purchasing behaviours of individuals. Previous research has identified that an abundance of unhealthy food outlets exist in the low socioeconomic suburb of Eastern Porirua, Wellington, New Zealand (NZ). The aim of this pilot study was to gain an understanding of the influences on stocking, pricing and promoting decisions of small convenient food store owners (small grocery stores and dairies) in the suburb of Eastern Porirua, Wellington. Food store owner solutions to support improving access to healthy and affordable foods within these stores was also sought.

## **Methods**

In-depth interviews were undertaken with six store owners to obtain their views on both the barriers and factors which promote the stocking, pricing and promotion of healthy foods within their stores. Thematic analysis was used to identify the predominant and recurring themes.

## **Results**

The predominant influences impacting food store owners decisions were those exerted by consumers themselves, the demands they impose and their impact on business profit. Customers in this low socioeconomic area were reported to be very price conscious and this was reflected in their purchasing behaviour and 'in store' owners' stocking decisions. Suppliers and manufacturers also exert marked influences on store owners through their pricing and promotion systems as do the wider structural and political policies of government. Store owners showed willingness to modify their stocking behaviours as long as customer demand and profitability can be maintained.

## **Conclusions**

The results of this research support similar barriers and intervention points for store owners stocking decisions as those identified by the NZ and international literature. Food affordability has been widely reported as a major barrier to healthy food in the literature and these findings are reflected in this study and 'in store' owners stocking decisions. This project concludes that food suppliers and government policy play powerful roles in the decisions of small food stores in Eastern Porirua and potentially have an important role in addressing the wider issues of income, food pricing and promotion to improve access to healthy foods in these deprived areas. Further research should investigate ways to support store owners with business skills and more 'up-stream' sectors to influence pricing and promotion of healthy foods. This project recommends the need to develop stronger linkages with both food retailers and suppliers and distributors to engage them in the solutions on how to provide customers in low income areas with more affordable and healthy food.

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# Chapter 1: Background and Introduction

Convenience food store (dairies, small grocery) owners in Eastern Porirua (including Cannons Creek and Waitangirua), Wellington, New Zealand (NZ) were the subject of this study. Qualitative methods were used to identify store owners perceptions on the factors influencing their stocking, promoting and pricing of healthy foods in their stores.

## Background

The motivation for this study stems from prior research which explored the accessibility and availability of healthy food in two socio economic disparate areas of Eastern Porirua and Whitby, Wellington (Woodham, 2009). Woodham's (2009) research sought to examine the potential local environmental determinants of access to healthy food which may influence behaviour and the high rates of obesity, Type 2 diabetes and food insecurity. The population of Eastern Porirua has high levels of socioeconomic deprivation and a high proportion of Pacific and Māori people compared to the much more affluent neighbouring Whitby (White, Gunstan, Salmond, Atkinson, & Crampton, 2008). This research provided evidence that various aspects of the environment of Eastern Porirua contributed to the easy access of unhealthy foods but poor access to healthy and affordable foods within the town centre shops. No supermarket was situated locally but an abundance of convenience and fast food outlets offering less healthy foods were identified. A small survey suggested healthier food products such as low fat milk and grainy breads were more expensive within these stores and fruit and vegetables appeared to be less available. Four focus groups with local residents supported that all of these factors were barriers to accessing healthy food. These findings and recommendations of this work have been the impetus to explore the influences impacting the 'in-store' food environment. This work is being undertaken with support of Regional Public Health (RPH) within the Nutrition and Physical Activity team whose aim is to reduce nutrition related conditions by improving access to healthier and more affordable foods.



# **Chapter 2: Literature Review: Influences on the 'in- store' food environment**

## **Introduction**

Links have been made between health, obesity and access to healthy food. Neighbourhood-level geographic access and the density of food outlets are thought to be some of the area-level factors that contribute to a community's access to healthy food. Store type and the 'in-store' food environment have also been used as markers of the quality or 'healthfulness' of store contents. Small convenience food stores can be an important source of food in communities, which lack a supermarket or experience a disproportionate number of these types of food outlets. Understanding the local influences on the 'in-store' environment will potentially support further work to modify this environment and its impact on food consumption. This literature review examined the international and NZ research on the factors influencing the 'in-store' food environment of small convenience stores and intervention points which could be used to help to support better access to health foods within these stores. This review has helped clarify the need for exploring this environment further.

To review what is already known in this field, a search was conducted using Web of Knowledge, Scopus, Google Scholar and Business Source Complete article databases using the key words: 'convenience store', 'corner store', 'grocery store', 'food stores' and 'healthy food', 'fruit', 'vegetable', 'availability', 'affordability', 'programme', 'program' and 'intervention'. Articles were also identified through searching cross-references of relevant papers. Local references and grey literature were obtained through other contacts/colleagues working in this field of work. Searches were limited to those studies published in English that could be accessed online or locally.

## **Obesity, health and socioeconomic status**

Nutrition, physical activity and maintenance of a healthy body weight play an essential role in health (Ministry of Health, 2003a). The high incidence of nutrition related risk factors such as overweight and obesity, raised cholesterol levels and low intakes of fruit and vegetables significantly contribute to high rates of chronic disease in New Zealand (Ministry of Health, 2003b). A higher proportion of Māori and Pacific people and those living in neighbourhoods with high socioeconomic deprivation, experience poor nutrition, food insecurity, obesity and related health outcomes (Ministry of Health, 2003b, 2008). Food insecurity is defined as the “limited or uncertain availability of nutritionally adequate and safe foods or the limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (Holben, 2006, p. 447). Maori and Pacific populations and in those people on limited incomes are over represented in food insecurity statistics (Ministry of Health, 2003c). Poorer health outcomes, obesity and chronic diseases linked to food insecurity (Russell, et al., 1999) not only impact on quality of life but also national health care costs (Swinburn, et al., 1997). Ways to manage these public health issues are being sought both locally and internationally.

## **Complexity of obesity**

Tackling obesity however is complex as acknowledged by various ecological models (Glanz, Sallis, Saelens, & F, 2005; Swinburn, Egger, & Raza, 1999). These models are useful in helping us understand the combined importance of biology, behaviour and environmental influences on an individual's food ‘choice’. Swinburn (1999) described the ‘obesogenic environment’ as ‘the sum of influences that the surroundings, opportunities or conditions have on promoting obesity in individuals or populations. While early obesity interventions have focused on biological and behavioural aspects, Swinburn (1999) suggested environmental influences also need to be addressed to bring success, especially for more at risk populations.

The ANGELO (Analysis Grid for Environments Linked to Obesity) framework describes the complexity of issues underlying the obesogenic environment (Swinburn, et al., 1999). Individuals are said to interact with the environment in various micro settings such as food outlets and neighbourhoods. These micro-settings in turn can be influenced by broader or macro-sectors such as the food industry and governments. Physical, economic, socio-cultural and political factors all further influence these settings and sectors and the food decisions and choices made within them. The physical aspects relate to what 'is available and accessible' in the environment and may encompass the store type such as a fast food outlet, convenience store or supermarket and the mix of food store types available. Economic factors relate to all aspects of 'the costs' of food and the political environment to the laws, regulations and policies that impact on individuals and organisations behaviours. Sociocultural factors are concerned about societal attitudes, beliefs and values related to food.

Success with modifying the obesogenic environment for populations requires identifying and addressing these factors to create a more supportive environment to promote easier access to healthy foods (Association, Canada, & Organization, 1986). Interventions need to be comprehensive and multileveled to impact the multiple influences on food choice and support more effective, sustainable and equitable solutions to address obesity. 'Upstream strategies' that influence environmental and policy change such as a fat or sugar tax are more likely to level the playing field for socially disadvantaged populations whose options for healthy foods and activity choices are already more limited, particularly compared to individually focused interventions and education (Kumanyika, et al., 2008).

## **Physical environment of convenience stores: food quality**

Store type has been associated with the both the availability and affordability of healthy foods. A variety of methods have been used to measure the physical environment of stores including stock type, quality and price of produce. Surveys (Horowitz, Colson, & Hebert, 2004), audits (Laska, Borradaile, Tester, Foster, & Gittelsohn, 2009), measurement of the shelf length ratio of healthy to unhealthy

foods (Farley, et al., 2009), food basket surveys (Government of Western Australia & (UK), 2010) and the more comprehensive tool, Nutrition Environment Measures Survey in Stores (NEM-S) (Krukowski, West, Harvey-Berino, & Elaine Prewitt, 2010) have all been used to assess the varying characteristics of different stores types. Small grocery and convenience stores have been associated with the lower availability of healthy foods, the greater amount of pre-prepared foods and less fresh produce and higher costs (Glanz, Sallis, Saelens, & Lawrence, 2007; Larson, et al., 2009; K. Morland, et al., 2002; Sloane, et al., 2003; Wong, et al., 2011). Conversely supermarkets and green grocers have been associated with lower prices and better availability of healthy foods. Due to these characteristics, supermarkets and greengrocers have been used as a marker of access to healthy food and convenience stores and fast food outlets as a measure of access to less healthy options (Burns & Inglis, 2007). Locally, Woodham (2009), used a very small survey of milk and bread, to assess the affordability and availability of different milk and bread types within local food outlets. Bread and milk were more expensive in convenience stores than supermarkets and less healthy options of milk and bread were either the same or a cheaper price than the healthy options. The small size of this survey however makes it difficult to draw any conclusions that can be more broadly generalised. The findings however do support other similar research and provides impetus for this study and the ways to reduce barriers for customers to accessing affordable healthy food. The factors influencing store owners decisions surrounding the stocking of affordable healthy foods in these convenience stores, are of interest in this study.

## **Economic environment: The affordability of healthy food**

Studies have found varying associations between the ease of access and the cost of healthy foods in neighbourhoods of differing socioeconomic status. Food affordability has been related to food choice, diet quality and obesity (Cummins & Macintyre, 1999; A. French, A, Story, & Jeffery, 2001; S. French, A, 2003) and is therefore a factor that needs to be addressed in poorer communities where access to affordable healthy foods is more difficult (Cummins & Macintyre, 1999; Horowitz,

et al., 2004; Jetter & Cassady, 2006; Pearce, Hiscock, Blackley, & Witten, 2008; Renzaho, 2008; Woodham, 2009).

Food affordability is commonly found to be a major barrier to food choice for families on low incomes (Wong, et al., 2011). Women shoppers from low socioeconomic areas in Melbourne, reported in a qualitative study that food costs were the most important factor to influence their food choices (Inglis, Ball, & Crawford, 2005). Participants in a NZ study also expressed that the most important influence on food choice was price. Price was more important than taste, promotions, purchasing habits, convenience and environmental factors such as organically or locally produced foods (C. Mhurchu, Ni, Matoe, Teevale, & Meagher-Lundberg, 2011). Similar findings have been established in a small focus group of residents in Eastern Porirua, Wellington, where the high cost of food and a lack of income were reported as major barriers for accessing healthy food (Woodham, 2009). The financial difficulties in accessing healthy food for low incomes families in NZ has also been highlighted by a theoretical exercise that quantified the proportion of income required to purchase food that would meet the NZ nutritional guidelines (Robinson, 2010). The low income scenarios needed to spend between 23-53% of their income (compared to the NZ average of 16%) to purchase a healthy diet leading to stress in catering for a families 'basic' food needs.

Healthy food prices can be more expensive than less healthy alternatives as shown by a comprehensive assessment of food access and food costs recently assessed by three main food basket surveys in 160 representative grocery stores throughout Western Australia (Government of Western Australia & (UK), 2010). Foods with higher energy content were found to be considerably cheaper when compared by weight to both those with higher nutritional composition and higher perishability. This supports other international (Jetter & Cassady, 2006) and NZ research which has found healthy foods to be higher in cost than less healthy alternatives (Department Human Nutrition Department & Otago University, 2010; C. N. Mhurchu & Ogra, 2007; Wang, et al., 2009).

Beaulac's (2009) systematic review of food basket surveys also identified that the price of foods can be more expensive in convenience stores compared to larger supermarkets although variations exist in different countries. A small survey of food costs in convenience stores, in rural Tai Tokerau, Northland, NZ (Hart & Korohina, 2010), supported these findings. Givoni (2010) suggested large supermarket chains were able to offer cheaper prices and better variety of food types than smaller independent chains due to their greater buying power. Similarly, Kaufman (Kaufman, MacDonald, Lutz, & Smallwood, 1997) suggested that the lower prices in supermarkets are related to the economies of scales offered by higher sales volumes. Supermarkets are therefore able to provide lower store mark ups and margins allowing lower prices than smaller grocery stores.

## **Influences and interventions points: impacting the sale of healthy food**

A range of influences and intervention points that could impact food store owners stocking decisions have been identified in the literature (Bodor, Ulmer, Dunaway, Farley, & Rose, 2010). Formative evaluation - the gathering of information in order to plan, refine and improve a programme (Waa, Hiolibar, & Spinola, 1998) – is one means of assessing influences on store owners and a way to support appropriately targeting interventions to achieve greatest success (Seymour, Lazarus Yaroch, Serdula, Blanck, & Khan, 2004).

### ***Influences on stores owner's stocking, pricing, promotion decisions***

#### **NZ studies**

'Healthy Kai' is a multileveled intervention run since 2003 in several low socioeconomic town centres of Auckland, NZ (Clinton, Appleton, & Dobson, 2008) and more recently in modified forms in other centres including Paeroa (Cross, 2010). Formative evaluation was not identified in the development of programme however face to face interviews of participating retailers (Clinton, Appleton, et al., 2008) were undertaken in process evaluation – the documentation of things done during the programme (Waa, et al., 1998) . This supported an understanding of the influences

faced by local store owners in their engagement in such programmes. Profit was reported as being key to participation along with the provision of educational and promotional material. Low customer demand, insufficient space, high cost of ingredients, lack of time and staff to prepare appropriate foods were all reported as barriers. The low income of customers and the lack of innovative promotional strategies such as price incentives were reported barriers contributing to the difficulties in achieving individual behaviour change by such interventions alone. Promotion, staff training and incentives for both retailers and customers were recommended to support greater engagement and success.

Influences on food store owners participating in the Paeroa, 'Hauraki Healthy Kai' intervention were also identified in a small research project using formative evaluation (Cross, 2010). This data was specifically collected to support the development of a nutrition resource kit for store owners (Cross, 2010). Seven retailers of cafes, bakeries, convenience stores and fast food outlets, participated in a semi-structured interview surrounding their current practises and barriers to healthier foods sales. Customer demand, food quality and difficulties sourcing appropriate ingredients were commonly raised as barriers to healthy food stocking decisions. Resources to support healthy changes such as healthy combo meals were suggested as ways to engage food store owners.

### **International studies**

The 'Buywell Retail' project (Sustain, 2011) run in low income areas of London provided an example of how formative evaluation can support development of an intervention. This project worked with convenience store owners to increase fruit and vegetables sales from March 2009 until March 2010. Formative evaluation of store owners raised concerns that fresh produce was less profitable due to poor sales and high wastage. This however was related to the use of poor quality produce, high prices and a lack of understanding of how these foods need to be managed and displayed. With the understanding that fruit and vegetables can be highly profitable, this project worked with fifteen stores to grow their sales of fresh healthy food. Fruit and vegetable sales increased on average by 60%. Good

community links and the investment of new refrigeration for displaying fruit and vegetables was reported by store owners as supporting success.



Other food store interventions have also used interviews or food audits in a formative evaluation to identify local issues for store owners to support the development of appropriate and effective interventions (Peterson, et al., 1986) (McManus, Brown, & Maycock, 2007). The most comprehensive, well planned and evaluated food store interventions identified in this literature review were those developed as part of a US series 'The Healthy Stores'. These studies assessed factors influencing food store owners and customers to support intervention development in the Marshall Islands (J Gittelsohn, et al., 2006), an Apache reservation in Arizona (Vastine, Gittelsohn, Ethelbah, Anliker, & Caballero, 2005), Baltimore city (Joel Gittelsohn, et al., 2007) and more recently in Hawaii (J. Gittelsohn, Vijayadeva, et al., 2010; Novotny, et al., 2011). Five dominant themes emerged from the evaluation described in these NZ and international studies as being significant influences on food store owners stocking decisions. These influences surrounded profitability, customer demand, characteristics of foods, the physical store characteristics and suppliers and distributors.

### *Profitability*

In a number of studies, the most consistent theme emerging from food stores owners was the importance of profit (Cross, 2010; J Gittelsohn, et al., 2006; Joel Gittelsohn, et al., 2007; McManus, et al., 2007; Peterson, et al., 1986; Vastine, et al., 2005). Sales success, price, cost effectiveness, cost of ingredients and monthly sales were terms used to describe the importance of profitability to food store owners in their decisions surrounding foods they stocked. Shop owners were willing to trial new foods as long as they did not change profit.

### *Customer demand*

Customer demand, closely related to profitability, was also highlighted as a strong motivating factor for shop owners decisions to sell products in their stores. A shop owner commented in one study that "If people buy it – we sell it", (J Gittelsohn, et al., 2006, p. 400). Maintaining customer demand while minimising expenses was desirable (Peterson, et al., 1986). Affordability for customers was an important factor identified by shop owners.

### Characteristics of food

Physical characteristics of food such as quality, taste, perishability of fruit and vegetables (Cross, 2010; Joel Gittelsohn, et al., 2007) and seasonal availability (McManus, et al., 2007) were also considered important in making stocking decisions. Only two percent of store owners however in an Australian study stated that the nutritional content was an influence on their stocking decisions (McManus, et al., 2007).

### Physical structure of food store

The physical characteristics of food stores themselves were also a consideration for some store owners in stocking decisions including the lack of space, fridge capacity, equipment and storage facilities available (Cross, 2010; Joel Gittelsohn, et al., 2007; McManus, et al., 2007).

### Suppliers and distributors

Interviews with food store owners of nine small and one medium sized stores in a poor neighbourhood of Baltimore identified the importance of the food producers and distributors in stocking decisions and marketing strategies (Joel Gittelsohn, et al., 2007). Distributors may actually stock stores themselves and make independent decisions about restocking. Shop owners were influenced by the services provided by suppliers (McManus, et al., 2007) and the marketing strategies and delivery procedures offered such as the ability to return unsold foods and the promotions offered (Joel Gittelsohn, et al., 2007).

### ***Interventions points: to increase healthy foods stocks***

A review of food store interventions published between 1970 and 2003 found limited success in ten interventions reviewed in main chain grocery stores involving mainly information and incentive strategies (Seymour, Lazarus Yaroch, Serdula, Blanck, & Khan, 2004). Strategies that influence availability and access rather than providing health information were suggested to improve the success of such programmes. Addressing the macro-environment to impact wider environmental and policy issues and utilising formative evaluation with community leaders, customers and food store owners have been suggested as ways to strengthen effectiveness and sustainability

of food store interventions (J Gittelsohn, et al., 2006; Kumanyika, et al., 2008; Vastine, et al., 2005).

To date food store interventions in NZ have mainly worked at the micro-level, directly with the store owners to support strategies to maintain profit and customer demand while improving accessibility and availability of healthy foods (Clinton, Mahoney, Dobson, & Robertson, 2008). Internationally interventions have also worked at this level however increasingly the importance of working at macro-levels by engaging suppliers and distributors in the solutions is being recognised as a more sustainable way of improving the availability and access to healthy and affordable foods.

Key areas of intervention were recommended in the literature to support increasing the availability of healthy affordable foods while maintaining customer demand and profit. Recommendations surround influencing aspects of both the micro and macro environment including: pricing, publicity, incentives, promotional skills and engagement with suppliers and distributors.

## **Micro-level interventions**

### *Food affordability*

High food prices and low incomes have previously been outlined as major barriers to customer purchasing behaviour. Ensuring healthy food is priced competitively by influencing both micro and macro environments are potential strategies to attract better sales and consumer demand for such products (Glanz & Yaroch, 2004; Hong Tan). Price reductions alone or in combination with promotion within the store setting have been shown to have the potential to significantly increase healthy food purchasing behaviours and sales (S. French, A, 2003; Peterson, et al., 1986; Popkin, Duffey, & Gordon-Larsen, 2005). Vending machines in twelve workplaces and secondary schools in US (S. French, A, 2003) found price reductions of 10, 25, 50% on lower fat snacks increased sales by 9%, 39% and 93% respectively. A 50% reduction in the price of fruit and baby carrots resulted in a four-fold increase in fruit sales and a two-fold increase in baby carrots. The importance of maintaining healthy food prices at the same or cheaper than the alternative was also identified in the yet to be published 'Feed Your Need' programme (Crocket & Rush, 2010, September).

This programme identified the need to consider communication, cost (healthy foods needed to be at the same or cheaper prices) and convenience to support environmental change within six cafes at Auckland University of Technology (AUT). The predominant display and sale of fruit at cost contributed to a 20-45% increase in fruit sales when compared over a one year period (Crocket & Rush, 2010, September).

### Publicity/Advertising

Cooking demonstrations, taste tests, free giveaways, point of purchase shelf labels, posters, flyers, recipes, education displays and resources, mass media are all methods of publicity which have been trialed to support food vendors maintain customer demand and profit (Clinton, Appleton, et al., 2008; Cross, 2010; Curran, et al., 2005; J Gittelsohn, et al., 2006; J. Gittelsohn, Vijayadeva, et al., 2010; Vastine, et al., 2005). While outcomes are variable, evidence of increased customer interest, stocking and sales of healthy foods supported these as being viable methods to use in food store interventions. Increasing the shelf space and display prominence of healthy foods (Farley, et al., 2009; Popkin, et al., 2005) has been found to be an effective method to increase customer demand for healthy foods.

### Incentives

Varying incentives for both store owners and customers are suggested as a way to engage change. Monetary incentives, (Song, et al., 2009), the provision of free stock (J Gittelsohn, et al., 2006) and support with training, free advertising or reduced business fees (McManus, et al., 2007) have all been identified as being supportive. Food vouchers and coupons for customers have also been suggested (Joel. Gittelsohn, et al., 2009) although were not found to be a very effective form of attracting customers in the 'Healthy Kai' programme (Clinton, Mahoney, et al., 2008).

### Promotional skills

Providing stores owners with guidelines on strategies for food purchasing, stocking and placing of foods have also been recommended as a point of intervention (Song, et al., 2009). A pilot intervention run in Scotland in 600 stores during 2009, provided skills training to store owners on retail strategies including advertising, promotion and

commercial thinking (Economic and Social Research, 2009). This intervention was run in both deprived and affluent areas where fruit and vegetables were unavailable. Evaluation of this programme, which involves a partnership between the Scottish Government, the Grocers Federation and convenience stores, identified improved sales of healthy foods of up to 30%. The London based 'BuyWell' project also identified increased sales of fruit and vegetables when retailers received a store development plan, business support, fresh produce training, marketing materials and a launch event (Sustain, 2011).

## **Macro-level interventions**

### Food affordability

The literature also supports the potential effectiveness of changing purchasing behaviour by price modification at a macro-level, such as price discounting of the 12.5% Goods and Service Tax (GST). A large randomised control trial in NZ found price discounts showed more promise in changing behaviour compared to the provision of healthy eating education over a six month study period in Māori, Pacific and mostly woman and reasonably well educated supermarket shoppers (Cliona Ni Mhurchu, Blakely, Jiang, Eyles, & Rodgers, 2010). The removal of Government Service Tax (GST) and the provision of an electronic discount card targeting those on low incomes to receive discounts off basic foods have been suggested methods of improving food affordability by other NZ researchers (C. Mhurchu, Ni, et al., 2011) (Bowers, et al., 2009) (Gorton & McKerchar, 2010).

### Suppliers and Distributors

The value of targeting suppliers and distributors as a means of influencing food store owners was highlighted by the Healthy Food Hawaii project (HFH) (J. Gittelsohn, et al., 2010)(Novotny, et al., 2011). This programme worked to increase linkages with local food producers and distributors to showcase products in taste testing, cooking demonstrations, gift certificates and giveaways. Evaluation of the programme noted challenges in integrating multiple stakeholders but also suggested the enhanced implementation and likelihood of improved sustainability.

## **Summary**

The relationship of obesity, food insecurity, inequalities and the 'in-store' food environment are briefly outlined. It is clear from the above literature that a complex range of physical, economic, social and political factors (Swinburn, et al., 1999) interact to contribute to an individual's food 'choice', nutrition and obesity. The 'in store' food environment is one area of intervention where potential exists to influence access to healthy and affordable foods. Small grocery and convenience stores have been identified as those selling less healthy food often at higher prices (Government of Western Australia & (UK), 2010; K. Morland, 2002). While results of research into the association between geographic access to healthy foods outlets and socioeconomic status in NZ has been mixed, one low socioeconomic community in the Wellington region found an abundance of convenience stores contributing to poor access healthy foods within its town centre (Woodham, 2009).

This literature finds that food store owner's practices are strongly influenced by factors within both the micro and macro sectors including profitability, customer demand, characteristics of food, physical components of stores and suppliers and manufacturers practices. Interventions which use formative evaluation and address these 'up-stream' sectors are likely to support a more sustainable, effective way to improving equitable access to healthy and affordable foods.

## **Rationale for this research project**

There is increasing interest in finding ways to influence food availability and affordability within the 'in-store' food environment as a way of impacting food choice and health. The need for intervention within food stores is supported by a recent American report which recommends improvement in the access to high quality, affordable foods through new or improved grocery stores and healthier corner stores as one of the six priority areas to address the obesity epidemic (Levi, Segal, Laurent, & Kohn, 2011).

This formative evaluation aims to increase our understanding of the unique set of local influences on food store owners stocking decisions in Eastern Porirua. The lack of research in this area contributes to the need for this current study to support work locally and nationally to improve access to healthy and affordable foods.

## **Research Questions**

These two questions are the focus of this research:

- *What are the factors influencing (barriers and promoters) the stocking, promotion and pricing of 'healthy' foods by small store owners?*
- *Where might interventions be most effective in modifying the retail 'in-store' environment?*

## **Chapter 3: Methodology**

This chapter outlines the ethics approval, choice of methodology, methods, study design, recruitment, the development of the interview schedule and data analysis.

### **Ethical approval**

Ethics approval was gained at the beginning of the study, prior to any data collection (February 2011). Category B ethical approval (departmental level of a proposal involving human participants) was obtained from the Department of Public Health, University of Otago, Wellington (Appendix A: Ethical Approval).

### **Methodology**

This study utilises largely a qualitative study methodology based on a general inductive approach (Thomas, 2006) to provide a 'simple and straightforward way' to address the study question. Thomas (2006, p. 238) describes this as "a systematic way to analyse qualitative data in which the analysis is likely to be guided by specific evaluation objectives". This approach, primarily based on grounded theory (Patton, 2002), uses "detailed readings of the raw data to derive concepts and themes without the constraint of structured methodologies". This approach does, however, limit the theory building to the presentation and description of the most important categories of information.

### **Study design**

A semi structured interview schedule (Patton, 2002) was developed (Appendix B: Interview Schedule) and interviews were then conducted with food store owners. This study design enabled an in-depth and detailed understanding of the issues as directly experienced by each store owner from their own professional and cultural perspective and reported in their own words. Qualitative research allows for 'inductive reasoning' and the generation of ideas and hypotheses on the topic largely without building on prior theories (Greenhalgh & Taylor, 1997). This approach also allowed for the use of information gleaned along the way to be used to modify the research methods and questions to enhance the richness and variability of subject



matter obtained. The researcher has worked as a clinical Dietitian and more recently in public health nutrition, which is likely to have contributed to prior knowledge and insight on the topic, as has the literature review. The interview schedule was based both on ideas derived from the researchers own thoughts and experiences and from the literature reviewed (Cross, 2010; J Gittelsohn, et al., 2006; J. Gittelsohn, Song, et al., 2010; Song, et al., 2009; Vastine, et al., 2005).

## **Interview schedule**

An initial interview schedule for food store owners was prepared including questions and associated prompts to guide and open up discussion on the main influences on Eastern Porirua store owners' stocking decisions. This helped to create discussion around the understanding of the term 'healthy foods', relationship with customers and how their store influenced resident's food choice. Food store owners' perceptions of their customer's interest and demand for 'healthy foods' within their stores were explored. Other discussion included the sourcing of foods, factors influencing the stocking, pricing and promotion of foods and possible intervention points. A final point of discussion used an imaginary or 'magic wand' situation to explore food store owner's interest in selling a greater range of healthy food options, if hypothetically, this had no impact on profit. The interview schedule was initially trialled with a dairy owner living in the same vicinity as the researcher, and refinements were made prior to its use in this study.

## **Recruitment**

The owners/managers of small convenience food stores identified in prior research (Woodham, 2009) were approached directly for recruitment into the study. This was initially done alongside the team leader of the Regional Public Health 'Healthy Porirua Project' who has close ties to this community, to support building trust, rapport and 'buy in' for the study. Due to this being a pilot study with limited time for it to be undertaken, a convenience sample (Marshall, 1996) was used. A total of eleven store owners were approached, with the first six owners, ready, willing and available, recruited for the interviews. Five store managers chose not to participate as they either lacked management or ownership responsibility, were overseas and or

were unavailable at the time of interviewing. One store owner suggested interviewing suppliers and distributors themselves as he identified this to be the source of the issue.

## **Consent**

Potential participants were provided with a cover letter (Appendix C: Cover Letter), information sheet, and consent form (Appendix A: Ethical Approval) and given time to consider the information and participation in the study, prior to providing written consent for engagement. This documentation provided information on how to withdraw from the study; how to contact the supervisors should they have any questions or concerns; how documentation would be stored; how the results would be utilised and an offer of a summary of the final results. Participants who were undecided were contacted at a later date to recheck their availability.

## **Conducting the interviews**

Interview times were scheduled at the participant's food store in June 2011 at a time suitable to them. The interview schedule was used to guide discussion with each food storeowner, each interview taking around 30-45 minutes. Time was allowed for development of rapport to support in-depth responses from each participant (Greenhalgh & Taylor, 1997). Interviews were audio taped with consent and transcribed by an independent contractor, shortly after each interview. Investigator field notes augmented data collection and these were used to check the validity of the transcriptions. Each participant was gifted a \$40 petrol voucher for their participation, which was funded by Regional Public Health (RPH).

## **Analysis**

Data analysis used a thematic approach based on forming networks of main themes (Attride-Stirling, 2001). Interview transcriptions were read closely to become familiar with the content. A clearly defined coding system was developed to assign to the text to support making sense (Appendix B: Interview Schedule) and order of the data (Appendix D: Interview Coding System).

Various levels of themes emerged from the coded text through discussions between the researcher and supervisor. These themes were classified from lowest (basic) and middle order (organising) to macro (global) themes that summarised and made sense of the lower order themes. Text relevant to each theme was identified and used to support the themes within the results section. This process facilitated a process of 'reflection and discovery' (Hansen, 2007 p. 150) however the interpretation of the data was done through the lenses of the researcher.

## Chapter 4: Results

This section summarises the collected data to answer the research questions about food store owners' perceptions of the influences on stocking healthy foods and interventions points to support the promotion of healthy foods within the retail 'in-store' food environment.

### Background

Out of eleven food retailers approached, six agreed to participate in this pilot study. One manager and five owners of these independently operated and varying sized stores were interviewed. Five stores were located in Cannons Creek area and one in the nearby Waitangirua. The six shop owners who agreed to participate all had busy schedules and interview times were arranged when more than one shop assistant was available. All interviews were undertaken within the shop owners own premises mostly at the shop counter itself with customers coming and going.

Shop owners had mostly been working in their businesses for many years (from 17 to 25 years) and appeared happy to talk and openly share their experiences. All the participants were male owner operators and identified they had friendly relationships with their customers. To help illustrate discussion points and to reflect the food store owners thoughts, quotes have been are used verbatim. The use of [sic] indicates that any errors or apparent errors in the copied material are not from transcription but have been derived directly from the original discussion.

Research findings outlined have emerged from the frequent and dominant themes in the raw data as a result of thematic analysis (Attride-Stirling, 2001). Three broad or global themes emerged from the interviews. Organising and basic themes stemming from these global themes were also identified and are outlined in Table 1 and expanded in the following text.

**Table 1: Interview Results and Analysis**

<b>Global Themes</b>	<b>Organising Themes</b>	<b>Basic Themes</b>
<p><b>Pricing</b></p> <p>(Overall importance of food pricing )</p>	<p><b><i>Appropriate pricing</i></b></p> <p>(Pricing suitable for customers)</p>	<p><b>1. Setting prices</b> (How prices are set in store)</p> <p><b>2. Deals and running items</b> (Importance of suppliers food deals and specials)</p> <p><b>3. Competitiveness</b> (Competitive pricing to attract customers)</p>
<p><b>Maintaining a profitable business</b></p> <p>(Profitability is key to business)</p>	<p><b><i>Being a good shop keeper</i></b></p> <p>(Attributes contributing to being a 'good business' owner)</p>	<p><b>1. Understanding 'our' customer needs</b> (Understanding customers socioeconomic status, health, financial, cultural needs)</p> <p><b>2. 'Our' role in the retail market</b> (Role of convenience stores to stocking healthy foods)</p> <p><b>3. Meeting business needs</b></p> <p><u>Customer demand</u> (Stocking what consumers demand)</p> <p><u>Affordability</u> (Stocking foods that are affordable and make a profit)</p> <p><u>Being competitive</u> (Being competitive, differentiating within store and with other stores)</p>
<p><b>Passive Role of store owner</b></p> <p>(Lack of proactive role of store owners)</p>	<p><b><i>Lack of control</i></b></p> <p>(Other controls influencing store owner practices)</p>	<p><b>1. Supplier control</b> (Control exerted by suppliers)</p> <p><b>2. Absence of marketing practices</b> (Lack of store owners interest in marketing)</p> <p><b>3. Government control</b> (Wider icontrols on store owners e.g.taxes, GST)</p>

The importance of pricing; maintaining a profitable business; and the passive role experienced due to a lack of control over wider influences on their businesses were the three global themes identified as influencing food store owners stocking, pricing and promotion decisions. Potential interventions points raised by store owners in response to the question on how to support an increase in the sale of healthy foods are discussed under these global themes and are summarised at the end of this section.

## **Pricing**

Pricing was talked about as a main driver for stocking (in response to consumer demand). The pricing of food obtained from suppliers and manufacturers and the pricing within their store were important ways of impacting consumer affordability and competitiveness with the local market.

### ***Appropriate pricing***

Setting appropriate prices, obtaining 'deals' and 'running specials' and competitive pricing were all seen as important in this low socio economic neighbourhood.

### **Setting prices**

Store prices are based on the purchase price obtained from the supplier, their suggested retail price, profit margins, other competitors and the needs of both customers and profit. Shop owners spoke about modifying prices specifically to cater for their clients in Eastern Porirua who were on low incomes.

Foodstuffs set the price. .... They suggest a price and so it's really up to us what we charge. If we want to go lower, there is nothing, and if we go higher well that's yeah to our loss. You know we size it up at that particular time, you know what is happening around the area.

### **Specials, deals and 'running items'**

Store owners talked about suppliers fortnightly brochures and emails which were used to promote special food deals and allow for lower prices to be passed on to customers. Obtaining a good price and volume of product with these special 'deals' was described as an important driver of foods stocked, helping to create customer demand and ensure being competitive with other stores. The food 'deals' while generally generating lower margins allow for gaining profit in

alternative ways such as acting as a draw card for customers and remaining stock being sold at regular prices once the 'deal period' is complete.

For two weeks you won't make money, because the margins are so low, but after two weeks the special is gone and we put the normal price back on again, and whatever is left over will still continue to sell.

The availability of cheap products from Asian importers strongly influenced the stocking of these products. Food store owners noted that similar products were usually selected on price and not nutritional value.

See this drink here? Asian stuff. Come from Asia. Yeah freighted from Asia comes to Auckland, trucked from Auckland to my shop, it costs only 52 cents. It (Coke) would probably cost me something like \$1 - \$1.50. So that (Asian drink) goes for \$1 in the fridge so that's a selling point and Coke goes for \$1.70 so you can see the difference. ....What their pocket can afford

### **Competitive pricing**

Competition with other food stores in the area was also an important consideration in pricing (discussed below).

## **Maintaining a profitable business**

All store owners talked about the primary importance of business viability and profitability with themes emerging as to the factors they considered important in 'being a good shop keeper'.

### ***Being a good shop keeper***

Being 'a good shop keeper' necessitated store owners to understand and meet their customers' needs and their own role in the food retail market. Catering for customer demand, offering affordable foods and maintaining competitiveness in the local market were all seen as essential in meeting their business needs.

### **Understanding our customer needs**

Most store owners reported that they had both a good relationship with their customers and a good understanding of their needs. Store owners talked about their 'loyal customers' with one identifying that some customers visited not only

daily but five or six times a day. Food store owners were all of the opinion that healthy foods were of importance to their customers and reflected this by stocking foods such as muesli bars, trim milk, organic foods and free range eggs. Despite customers' general interest in healthy food, store owners however did not consider the demand for healthy foods in their stores to be very significant. Several quoted that healthy food sales accounted for only around twenty percent of business with the remaining being from less healthy foods e.g. soft drinks, meat pies. Shop owners were aware that customers source healthy foods elsewhere, particularly in supermarkets, which have larger size and capacity for variety.

Affordability (discussed below) was thought to be the primary factor in determining customer demand due to customers having large families and limited incomes. Alongside affordability, cultural, social and health factors were also talked about as influences on foods stocked. For example, store owners talked about offering foods such as coconut cream, corned beef and green bananas for the high proportion of Pacific people in their neighbourhood.

Say Porirua East you know, that side here, they'll have mostly all the stuff that people want, like corned beef.... And coconut cream. Green bananas and taro you know. So it's all in this area here. That's what they want so there's no point in having anything expensive and healthy foods there. They won't come. They won't try it because it's expensive.....

### **'Our' role in the retail market**

Food store owners spoke about their role in the market as one of convenience to cater for items needed by local customers at the 'last minute', as 'treats', for 'odd bits and pieces' or for those items that 'run out'. "We are just like a convenience place you know, that, whenever they (the customers) are short, they just quickly get it". Store owners tried to stock a variety of items requested by customers to meet their needs of convenience such as eggs, tomato sauce, bread, milk, butter and sugar. Most owners believed that their stores were not used for the main weekly shop.



## **Meeting business needs**

Food store owners interviewed in this study had been in the 'business' for a number of years and were clear that central to their business was customer demand, affordability and competitiveness.

### *Customer Demand*

Customer demand was of primary importance to store owners stocking decisions to ensure adequate turnover, sales and profit. Affordability (discussed below) was a key driver of this demand. Store owners talked about catering for the 'supply and demand' with a lack of demand being a major barrier for the limited stocking of healthy foods. One shop owner spoke of trying to stock diet coke but found it to be a very poor seller in contrast to the much higher selling sweetened variety. A sense of futility (due to lack of demand and high prices) was exhibited over stocking a greater range of healthy food, "there's no point in getting all nice and healthy stuff here and then nobody buys it." The lack of demand was specifically related to local and financial issues.

We only stock what they want and sell. That means, as I said, 70% is mostly junk food we sell. Chippies and other stuff you know. Only stock what we can sell. Something bulky quantity wise. We (the customer) got quantity, less money. They can get better value from a hot dog for \$2 so they will pick that. There are more children in the house and less money. That is the biggest essence.

Shop owners showed a desire and willingness to modify their business practises if customer demand increased or if their businesses were to move to a more affluent location.

I would change; we would change to selling healthy food if things, if that magic wand went out to our customers as well and make them buy healthy food then we would definitely change. We would have to supply them what they need, at the moment we are supplying them with what they need and it's not that healthy.

Advertising and especially television (but not newspapers or radio) were other factors identified as being an important influence on customer demand particularly in relation to new lines of food. Store owners felt they needed to stock these new items to meet the increased demands of customers surrounding these promotions.

V drinks or energy drinks that are new and people want to try those so we have to stock those. When they've seen an ad or something like that, then they will come in and ask for it.

Television advertising was recognised as being a potentially powerful strategy to promote healthier purchasing. Some also suggested more education would be worthwhile however the merits of taste sampling were thought to be limited for customers on low budgets.

Educating them about healthy foods. More education about what is healthy for them, what is good for them ...Yeah if they know what is healthy for them you know. Habits are hard to change sometimes, it takes a lot of education to change that.

### Affordability

Competitive pricing was described as being vital to maintain both customer demand and consequently business profitability. Store owners all believed healthy foods even basics such as bread and milk were more expensive than less healthy alternatives and this was regularly quoted as a major barrier to customers selecting such foods. Customers were seen as being very price conscious and while they may desire healthy foods their income prohibited them often from making such choices. Store owners needed to reflect this in their stocking decisions and did so by stocking lower priced, bulky and more filling foods with the taste and nutritional value of foods being only secondary considerations. 'Quantity not quality' was talked about as a way of 'giving good value for money' to meet customers' needs.

Those healthy products are expensive and therefore my customers, even though they know it's healthy they are still not going to buy it at a high price. It's like having margarine at different prices, they will buy the cheapest one because they know it does the same job, even though it's not as healthy.

Store owners talked about strategies to provide foods at the lowest possible price. Low cost breads were described as being the only ones purchased by customers and consequently the only bread often stocked. This was a driver for suppliers to produce budget bread described by one store owner as 'blown bread', where a small amount of ingredients were 'blown up' to produce a cheap affordable loaf.

And that is a budget bread. I don't know how much nutrition it has got written on the pack and all those things, but so far that is right because it is 'blown up' bread. Little flour and baking in some machine, it just blows the bread. There is very little flour, makes the white only \$1.60 a loaf. If you look at the good bread... they all cost you \$6 or \$7, \$7.50 ... So around this area they just can't afford it... The \$2 bread is the only bread we sell.

Store owners believed consumers would be interested in purchasing more healthy foods if they were available at lower prices. Store owners talked about the potential of suppliers to increase promotion and lower prices of healthy foods to increase demand and generate higher profits.

It would be good to be selling healthy food at low prices to make a profit. It's good. So that would be a good thing, and you would. If it made a profit, then you would be happy and you would do it. Because we run a business and a profit for business.

### *Being Competitive*

Similar products are sold by many of the small food stores within the Eastern Porirua location. Customers will shop around for the 'best buy', even for very small price differences making competitive pricing and differentiation very important in this market. While supermarkets are not located locally their higher sales volumes and lower prices make them important competitors. Smaller food stores identified lower price mark-ups (up to 30%) compared to the slightly larger food stores helping to maintain their competitiveness in the market. This however requires small store owners to make a higher turnover to generate appropriate profit.

... many stores selling the same product so we have to be careful with our margins especially bread and milk because there are a lot of competing stores. If there wasn't many stores we could have a higher profit margin. When Foodstuffs has specials our margins go.

The wholesale purchase price, product sales volume, speed of sale and expiry dates were all important considerations in stocking to ensure affordability and profitability. Foods (such as milk) were reported to be stocked and promoted due to their potential for sales and profit and not on their nutritional value.

It used to be popular but no customers are asking about trim milk (low fat milk). Like, they like the Cow and Gate (a low cost brand of milk). So people generally buy Cow and Gate. We will promote this as it is a big seller.

## **Passive role of food store owner**

Store owners did not see themselves as having much control over their retailing practises. In conjunction with the pressure of customers demand, store owners talked about the wider influences of suppliers and manufacturers and government policies on pricing and promotion of healthy foods.

### ***Lack of control***

Business viability combined with the limited incomes of customers, the wider controls of suppliers, manufacturers and distributors and the structural policies imposed by government were major influences on food storeowners to emerge from these interviews. Lack of space and refrigeration surfaced as relatively minor influences.

### **Supplier control**

These interviews provided a distinct sense that suppliers and distributors exert a major influence on food store owners in their stocking, pricing and promotion decisions including store placement and signage. This was evidenced by one store owner's comments that stock can be delivered by suppliers without their knowledge as a means of introducing a new product to the market. Stock is accessed from a range of sources including large distributors such as 'Food Stuffs' and smaller suppliers such as supermarkets and 'The Warehouse'. Smaller importers were also a source of both specialty foods and cheap Asian imported foods. Wholesalers and distributors actively market to store owners with monthly newsletters and emails and 'special food deals' and strongly influence pricing by providing recommended retail prices.

They (the supplier) do the marketing. They set the price. They give you a price to buy and they set a price, they give you a discount of 50% so makes it half price, they put the stickers on. Everything is done by them, the seller or the retailer doesn't know much about it, only gets his margin and things.

Store owners were not clear on the reasons for price differentials of different milks but attributed this directly to the prices set by suppliers and manufacturers. They were clear that making healthier milks cheaper would require suppliers to sell this to them more cheaply so that their profit margins could be maintained. Some shop owners believed suppliers had the potential to influence customers' uptake of 'healthy foods' by supplying healthy foods at lower prices (or less healthy foods at higher prices). Food store owners did not sense they themselves had much control over modifying price.

They could put the higher margin on the white bread, so that makes it more expensive...and that means people will start to buy more of the grainy bread because it's cheaper.

The power and resources of wholesalers and distributors seemed to contribute to store owners' sense of a lack of control over their business practises however this theme did not emerge directly from store owners as a potential area of intervention.

### **Absence of store owners initiated marketing practices**

In contrast to the planned promotions by suppliers, food store owners expressed a lack of real interest in their own marketing practices. Some food store owners did basic marketing of their products through placement, display boards outside their shops, within store pricing deals and displays of suppliers brochures about 'specials' available. None did any advertising in newspapers, radio or television. Overall there was little in the store owners discussion that suggested that promotion was an important role in their business. Placement was described by one store owner as being left to habit (placing foods were they have always been) or leaving this completely to the supplier themselves, 'they put it where they think'.

We don't advertise anything. The prices are shop prices, which are given by the suppliers, it all goes in the fridge window, and shoppers come in and see the price that is quite enough. They go through that and see what they can buy and what cannot buy, what they can afford.

## **Government control**

Store owners talked about their own lack of control to influence pricing and customer demand in contrast to the power of government policy. The impact of mechanisms such as excise duty, Government Services Tax (GST), 'free trade' regulations or 'deregulation' were talked about in relation to barriers to the sale of healthy and affordable foods and impact on the influx of cheap Asian foods. The importing of these cheap foods was described as 'killing made in New Zealand' due to price being paramount to customers. Store owners believed that interventions needed to be addressed by changes to government policy such as cutting Government Services Tax (GST) so that more people could afford to eat healthy foods.

Oh yeah, they (the government) are the only ones with the keys to correct it, nobody else. I mean, all those unhealthy foods coming whatever through customs, they can put on more excise duty and other stuff on that to make the cost bigger so that it sells less and healthy food sells more, but they don't do all that. They only care about the GST and excise duty, that's it end of the story...

## **Potential intervention points**

Shop owners identified that interventions needed to be able to maintain customer demand and the profitability of their businesses and this could be achieved through competitive pricing and the promotion of healthy food. Rather than directly working on store owners and customers, intervention points were identified as those involving suppliers and distributors and government policy to impact on their strong influences on pricing and promotion. The passive role store owners take in promotion also raised the potential benefit of interventions targeted to shop owners to support business training in promotional skills and ways to engage with suppliers to access more affordable and healthy foods for their customers.

## **Summary**

Six store owners of convenience stores in Eastern Porirua readily shared their time and thoughts on issues surrounding stocking, pricing and promotion of healthy foods in their stores. The primary influence identified by business owners was the need to provide for their communities with readily available, affordable food while maintaining profit. While owners were aware of the importance of healthy foods for their customers' health, they found the demand for them limited. High food prices and low budgets were the overwhelming reasons identified for the poor demand and subsequent low stocking of healthy foods. Food store owners identified a lack of control over the stocking, pricing and promotion of foods due to the strong impacts of suppliers and manufacturers over pricing and promotion and the wider systemic influences of government policies. These interviews clearly identified that changing customers' purchasing behaviours needed to address pricing at both levels of government policy and by working with suppliers and manufacturers to influence their practises.

## **Chapter 5: Discussion**

This chapter explores the research questions by using the key findings and examines them in relation to the literature surrounding this topic. This helps us to develop our understanding of both the barriers to stocking healthy food and also potential interventions points to support modification of the 'in-store' food environment. Key strengths and limitations of the study and further research and recommendations are outlined.

### **Overview of the research findings**

The results of this study have helped establish that the local barriers and solutions to healthy food access in convenience stores are similar to those identified in both local and international literature. While these store owners did not appear to have thought much about possible 'interventions' they clearly perceived a lack of control over their practices. The results of this study illustrate the impact of a complex array of physical, economic and political issues described in the ANGELO framework (Swinburn, et al., 1999), contributing to individual food choices and food store owners stocking decisions. The economic issues however were identified in this research as being the key influencing factor. Store owners show a willingness to offer healthier foods however the barriers identified need to be addressed for this to be feasible. Key to improving access to healthy affordable foods are interventions focused on the macro-environment including the food industry and at government levels.

### **Influences (barriers and promoting factors) on store owners for the stocking, healthy foods**

A better understanding of the influences on small food store owners explored in the first research question was gained while undertaking this research. Findings of this study support those reported elsewhere that profitability, customer demand and suppliers and distributors were dominant forces on food store owners stocking decisions. In contrast, the characteristics of foods and the physical structure of the food outlets had limited impact.



## ***Customer demand***

### **Food affordability and profitability**

These study findings support the literature, that stocking decisions are driven by customer demand due to their impact on profit and business viability (Cross, 2010; Joel Gittelsohn, et al., 2007). Views of store owners in Eastern Porirua support prior findings from residents (Woodham, 2009) that affordability is an important issue in purchasing decisions. This is not surprising knowing that food insecurity is a major problem in low income populations (Parnell, Scragg, Wilson, Schaaf, & Fitzgerald, 2003) and supports findings that affordability is an important factor in customer demand (Glanz, et al., 2007; Hart & Korohina, 2010; Wong, et al., 2011). The impact of food insecurity is highlighted in this study by high customer demand for cheap, palatable and energy dense food. Swinburn (2011) suggests that the supply of lower cost less healthy foods and improved distribution systems, are a major driver of obesity.

While some store owners believe that low income customers are not interested nor demand healthy foods (Joel Gittelsohn, et al., 2007), this study finds store owners are aware of the importance of healthy food for their customers. Other qualitative studies also found customers have good knowledge about the benefits of healthy foods and desire easier access to them for their own and their family's health (Joel Gittelsohn, et al., 2007; Webber, Sobal, & Dollahite, 2009; Woodham, 2009). Despite this knowledge, food store owners in this study needed to stock less healthy and lower priced foods to attract customers to 'buy' in their shops. They expressed a willingness to change their practices to stock more healthy and affordable foods, however maintaining profits and customer demand were paramount. These findings are supported by the evaluation of retailers in the "Healthy Kai" programme (Clinton, Appleton, et al., 2008) who identified improving health of customers as an important motivation for participating whereas barriers surrounded profit and customers demand.

### **Promotion**

In addition to price and customer demand these interviews reflect the strong influences of the promotion of foods by suppliers and television on stocking decisions. These findings are supported by local and international literature which

acknowledges the power of marketing of unhealthy foods especially to children and its impact on food preference, consumption and adverse health outcomes (Corinna Hawkes, 2007; National Heart Foundation, 2011). The lack of control expressed by store owners over these food promotions not surprisingly directly related to the influence of food suppliers and manufacturers and wider impacts of government policy (discussed below).

### ***Suppliers and Distributors***

The findings of overseas studies (Joel Gittelsohn, et al., 2007; J. Gittelsohn, Song, et al., 2010; McManus, et al., 2007) reflected these store owners perceptions that suppliers and distributors exert a strong influence over pricing, promotion and stocking decisions in small food stores and need to be part of the wider solution to improving healthy food access. Current food store interventions in New Zealand tend to focus on the micro-environment to support change within the food store itself by influencing food store owners practise and customer choices (Clinton, Appleton, et al., 2008). Interventions overseas are increasingly recognising the value of influencing the broader macro-sector especially the wider food system in their approaches (Novotny, et al., 2011). Gaining a better understanding of the local influences faced by suppliers and manufacturers may support work 'upstream' to strengthen and sustain improved access to healthy affordable foods within the 'in store' food environment.

### ***Government policy***

Store owners also linked the availability and pricing of food closely to government policy giving them a sense of powerlessness over their stocking decisions. These findings support Swinburn's (2011) conclusion that governments have abdicated their responsibility to address obesity. Government leadership, regulation, investment, monitoring and research are recommended if the drivers of obesity are to be reversed. Other New Zealand research (Smith & Signal, 2009; Swinburn, et al., 2011) supported these store owners beliefs that government has the potential to be very influential over food promotion and pricing and that this would be a more effective way of exerting wider reaching impacts on the 'in-store' food availability. Clearly advocacy surrounding government policies such as those that surround the regulation of food pricing and promotion needs to be

addressed as part of the wider and sustainable solution to improving the affordability and promotion of healthy foods in the 'in-store' environment.

## **Interventions to improve stocking of healthy foods**

The second research question aims to identify potential intervention points that could be used to improve stocking, pricing, promotion of healthy foods within convenience food stores. These are discussed in relation to ideas generated from the interviews and the literature on ways of improving access to 'in-store' healthy food.

Interventions within the micro, store or individual level are suggested in these interviews to support education of customers and store owners. While store owners have some role in supporting better pricing and promotion of healthy foods, most store owners clearly identified, as does the literature, that this would provide less impact than interventions directed at the macro-environment (Seymour, Lazarus Yaroch, Serdula, Blanck, & Khan, 2004).

### ***Micro-level interventions***

#### **Business training for store owners**

##### **Pricing and promotion**

Profitability is described by store owners in this study as being paramount to stocking decisions surrounding healthy food. They also identify a lack of the control over their business practises highlighting the potential value of additional training in promotion techniques and business skills surrounding healthy foods. Promotional interventions and resources such as those surrounding placement, meal combos, cooking demonstrations, loyalty cards and point of purchase signage already exist to support a few food store owners in low income areas of NZ to increase sales of healthy food while maintaining profit (Clinton, Appleton, et al., 2008; Cross, 2010; Hong Tan). A resource currently being developed for store owners (Young, 2011) may support increased awareness and stocking of healthy foods in a greater number of outlets. Extending this programme to include incorporate business and marketing skills and ways to influence suppliers and distributors to promote healthy and affordable foods maybe worth investigating. The Retailers Association of NZ (New Zealand Retailers

Association, 2011) maybe a way of gaining widespread support of retailers and strengthen such as approach. Lessons may also be gained from other interventions such as within the 'Scottish Groceries Federation' programme (Economic and Social Research, 2009) which provided display stands for healthy foods and training sessions on how to display, price and promote messages to customers on fruit and vegetables.

Plainly food affordability also needs to be considered in the mix of these promotional skills to maintain customer demand for healthy foods. Store pricing interventions that offer healthy foods at similar or lower prices than less healthy alternatives have been found to be an effective means of increasing the sales of healthy foods (Crocket & Rush, 2010, September; Popkin, et al., 2005). The strong influence of the macro-sector (discussed below) on food pricing however raises the need to actively involve these stakeholders as part of the long-term solution to improving access to healthy affordable foods.

### ***Macro-level interventions***

#### **Working with suppliers and distributors**

In this study, suppliers were shown to exert a major influence on both pricing and promotion of foods within these stores. Food store interventions overseas have identified that developing linkages and partnerships with stakeholders within the food system may strengthen ways to modify these practises (Novotny, et al., 2011). The up skilling of store owners to work more effectively with suppliers and distributors to influence the pricing and promotion of more healthy foods interventions is outlined in a Scottish intervention (Economic and Social Research, 2009). Novotny (2011) also described working with producers and distributors to increase the availability of local produce in stores by offering the opportunity to showcase their products by taste tests and cooking demonstrations. While challenges were identified, potential for enhanced implementation and sustainability was established. Similar interventions in New Zealand need to be considered as part of the solution to improving the 'in-store' food environment and the NZ Food and Grocers Council (The New Zealand Food and Grocery Council, 2011) should be considered as a stakeholder to support this work.

## **Government policy**

It is clearly evident from both the food storeowners' perceptions and the literature that sustainable solutions to both pricing and promotion of healthy foods also need to involve government policy. Swinburn (2011) described the need for solutions to address the obesogenic drivers of the food 'system' and the cheap and ready supply of energy dense foods. Policy led initiatives by both government and food industry are suggested as a means of sustainably and affordably reversing obesogenic drivers to support easier access to healthy food choices. Policies such as banning food marketing to children and the investment in healthy public food service policy are needed to address the affordability and promotion of healthy foods to make them easier to access by all people.

### More income

Addressing income as part of the solution to food affordability will need intervention at government levels. A range of potential strategies to impact on income are suggested by Regan (Regan, May 2009) including taxation, employment, education and public health advocacy.

### Lower food prices

A variety of economic measures to address ways of reducing food prices have been suggested in NZ research including the removal of GST off fruit and vegetables or a voucher system targeted at price reductions of healthy foods for high needs populations (Bowers, et al., 2009; Gorton & McKerchar, 2010; C. Mhurchu, Ni, et al., 2011). Subsidies, price controls and altered taxation of healthy foods have also been suggested by others (Smith & Signal, 2009). Continued advocacy is needed on the potential measures that could support more equitable access to healthy affordable food for people on low incomes. A 2008 US report offered a range of potential measures that could impact on price and accessibility of healthy foods (Hodge, Garcia, & Supriya, 2008). This report suggested ten major legal ways to influence obesity regulation including financial incentives and disincentives, regulations aimed at influencing food choice, controls around marketing and advertising, restriction of access to unhealthy foods and the creation of communities to support healthy lifestyles.

## **Promotion of healthy food**

Storeowners in this study believe that promotion methods currently used for unhealthy foods need to be redirected to healthy foods. These views are supported by NZ and US reports that recommend a shift from the increasingly aggressive forms of food marketing and advertising practises used on children and adolescence to those for healthier foods and beverages (Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008). The National Heart Foundation of NZ (National Heart Foundation, 2011) recommends strengthening government regulation around advertising to protect children from the marketing of unhealthy food and beverages to create a more supportive food environment for healthy food choices. Hawkes (2009) suggested the need for carefully designed promotion programmes utilising commercial approaches, to support the shift of the entire sales-promotion environment towards the selling and consumption of more nutritious foods.

## **Summary**

This pilot study has attempted to answer the two questions proposed on the influences and solutions to the supply of healthy and affordable foods within convenience stores. People living in Eastern Porirua are at a disadvantage when it comes to the accessibility and affordability of healthy foods within their local food stores. Influences on store owners to offer healthy affordable foods include customer demand for low cost foods, suppliers and distributors promotions and impacts of government policy. Solutions to improving the in-store food environment are likely to lie within these influences. While modifying the micro-environment by increasing skills of store owners maybe be a part of the solution, more effective and sustainable approaches to improving the supply of healthy affordable foods, are likely to stem from influencing the broader macro-environment and working with both the food industry and government to improve promotion and pricing of healthy foods.

## **Research Strengths and Limitations**

The strengths and limitations of this qualitative research project are outlined.

### ***Strengths***

This study included the use of prior research of the local food environment and a wider literature review to support and strengthen the development of the interview schedule. A trial interview undertaken at a store close to the researcher also supported the refinement of the interview schedule to ensure optimal appropriateness for its purpose.

Working at Regional Public Health allowed for a local colleague who lives in the area to introduce the researcher and gain 'buy in' with local storeowners. This local contact appeared to increase the shop owners' comfort in talking and discussing the issues that were important to them. The semi-structured nature of the interview schedule used in this data collection allowed for a variety of topics to be discussed and gave participants freedom to raise issues, which may not have been identified otherwise.

### ***Limitations***

This pilot study was undertaken in only six of the seventeen convenience stores in this neighbourhood within the Eastern Porirua area. Store owners who declined to participate in the interviews worked in stores of similar characteristics and locations to those participating. The author is not aware of any reason that these store owners views would differ markedly from those expressed by the participants. While a convenience sampling method was utilised, the outcomes are likely to reflect the views of food store owners living in this neighbourhood. They will however not necessarily reflect those views of store owners outside this community especially those differing in socioeconomic areas or where food store accessibility varies. These findings nevertheless are likely to remain important elsewhere as they reflect and support the influences identified in the literature.

While store owners appeared to be at ease in discussions, it is possible an interviewer with closer community ties would have elicited even greater and more frank feedback. Greater expertise at interviewing might also have enhanced the

quality of the collection of data. A more robust assessment of the issues could also have utilised the views of suppliers and distributors and customers themselves.

## **Research and policy implications and recommendations**

This study has identified further research that would expand on these findings and support a better understanding of how the 'in store' food environment' could be addressed. Further and continued research is recommended to:

1. Identify effective marketing strategies for small food store owners to support increased sales of healthy foods to customers while maintaining profit.
2. Develop an increased understanding of the influences faced by suppliers and manufacturers in the promotion and pricing of healthy foods. Find intervention points to enable working with suppliers and distributors to support increased availability of healthy and affordable foods in convenience food stores. Utilising or repeating a similar interview as undertaken in this study with these stakeholders would support this increased knowledge.
3. Explore ways government can support increased affordability and access to healthy foods for low income families.

These findings will be of interest to public health organisations, non Government Organisations (NGOS) and Primary Health Organisations (PHOS) and others working on ways to modify the food store environment to make easier access to healthy and affordable foods. These findings reinforce that changing this environment, needs much more than changes from food store owners themselves but requires wider public health measures to modify the wider issues such as family income, food affordability and television advertising. Sustainable solutions need to come not just from within health but need to involve government to address social and economic policy. Empowering communities, food store owners and suppliers and manufacturers along with local and national governments to all engage and work together on solutions to support better quality and reasonably priced foods within the food store environment will support a more sustainable solution.



Recommendations from this study are made in combination with findings from the literature on ways to enhance food store interventions including:

1. Formalising linkages and partnerships with food retailers, suppliers and distributors to further work on ways to influence the promotion and pricing of healthy foods.
2. The development of a tool for food store owners to support:
  - Business and marketing strategies to support increased sales of healthy foods to customers while maintaining profit
  - Working with suppliers and distributors to engage them in the solutions to provide customers with more affordable healthy food e.g. demand low fat and regular milks to be priced similarly and encourage the promotion of healthy foods to customers e.g. store placement.

## Conclusions

Good food is essential for everyone's health. Poor access to affordable healthy food is experienced in greater numbers by those with poor socioeconomic status and is related to increased obesity and nutrition related diseases. Convenience stores have been found to promote easier access to less varied and more expensive foods. These stores have been identified as more prevalent in one lower socioeconomic area of Wellington.

Creating a supportive environment within small food stores to enable easier access to affordable healthy food choices is a current area of interest in public health nutrition. The formative evaluation of small store owners in this study undertook to gain a greater understanding of the influences on their stocking, pricing and promotion decisions. Better understanding of the local barriers to stocking healthy foods at affordable prices will support more effective and sustainable interventions to improve this environment.

These interviews suggest that economic barriers are a strong influence on customer demand for healthy foods and this is reflected in food stocked in small stores. Suppliers and distributors strongly influence pricing and promotion decisions, as do policies such as GST and taxes imposed by government. Interventions must involve much more than the provision of skills and resources to food store owners but need to address the wider factors influencing customer demand. Working 'upstream' or within the macro-sector to influence income, food affordability and promotion of healthy foods are needed to support sustainable solutions to these issues. A greater understanding is needed of ways to work with suppliers and manufacturers and lobby government on the economic and political barriers to support access to healthy nutrition for all.

In summary, this project has established that store owners are aware that customers would like to purchase more healthy foods but economic barriers prevent them from doing so. The most effective strategies to impact on the pricing, availability, and promotion of the 'in-store' food environment and the unequal access to healthy food in Eastern Porirua are likely to be derived from 'upstream' approaches.

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# Appendix A: Ethical Approval

Form devised May 1995; updated May 1997; June 1998; May 1999, Dec 2000, June 2002

## ETHICAL APPROVAL AT DEPARTMENTAL LEVEL OF A PROPOSAL INVOLVING HUMAN PARTICIPANTS (CATEGORY B)

*PLEASE read the important notes appended to this form before completing the sections below*

**NAME OF DEPARTMENT:** Public Health

**TITLE OF PROJECT:** Small store owners perceptions of the factors (barriers and promoters) influencing the stocking, promotion and pricing of 'healthy' foods.

**PROJECTED START DATE OF PROJECT:** March 2011

**STAFF MEMBER RESPONSIBLE FOR PROJECT:** Vivienne Ivory, Department of Public Health

**NAMES OF OTHER INVESTIGATORS OR INSTRUCTORS:**

Vicki Robinson, Public Health Dietitian, Regional Public Health  
Enrolled in MHealSc Research Project Proposal (HASC780)

Carly Woodham, Health Promotion Advisor, Regional Public Health, Project Advisor

**BRIEF DESCRIPTION OF THE AIMS:** Please give a brief summary (approx. 200 words) of the nature of the proposal:-

The food environment of neighbourhoods, including both the proximity to food stores and availability of healthy foods in these stores, has been identified as an influence on food consumption, nutrition and obesity (Larson, et al., 2009; Laska, et al., 2009; Kimberley Morland & Evenson, 2008). Local research by Regional Public Health (Woodham, 2009) has similarly found that the neighbourhood environment impacts on food choices. Using the ANGELO framework (Swinburn, et al., 1999), Woodham identified barriers for residents to accessing healthy food in Eastern Porirua. These barriers included the poor availability and quality of healthy foods and the excess availability and promotion of junk food and confectionary in small local food stores. 'Healthier foods' such as whole grain bread and trim milk were also often found to be more expensive than less healthy alternatives. Despite a desire to be able to access and eat healthier foods, income and the price of healthy foods were identified in focus groups with local residents as barriers to doing so.

Interventions targeting food stores are one means of improving accessibility to healthy foods. Some work is being undertaken both locally (Clinton, Mahoney, et al., 2008) and internationally (Bodor, et al., 2010; J Gittelsohn, et al., 2006; Glanz & Hoelscher, 2004; McManus, et al., 2007; Peterson, et al., 1986; Vastine, et al., 2005) to identify the barriers and solutions to selling healthy foods. Woodham however recommends further work to identify local influences on small shop owners to the stocking, pricing and promoting of 'healthier foods'. An increased understanding of these issues would support more effective and locally relevant strategies to develop sustainable food store interventions in areas that lack ready sources of healthy food choices.

## **BRIEF DESCRIPTION OF THE METHOD:**

### **The participants**

Seventeen small convenience stores (dairies, small grocery stores) have been identified across Eastern Porirua (Woodham, 2009). A qualitative study methodology (Patton, 2002) will be used to facilitate an in-depth and detailed understanding of the influences (both barriers and promoting factors) on shop owner/manager to stock, price and promote healthy foods in their stores.

### **Types of data to be collected**

A semi structured face-to-face interview will be used to facilitate discussion on relevant issues with each food store owner/manager on factors influencing the pricing, promotion and stocking of healthy foods. The interview schedule will be developed alongside a dairy owner known to and living in the same vicinity as the researcher. This dairy owner will be asked to be a research partner to provide expertise surrounding recruitment and questionnaire design.

The interview schedule will be used to guide discussion and to collect data from approximately six of the small shop owners/managers in eastern Porirua who are willing and available to participate. Each interview is expected to take around 30 minutes.

### **Recruitment :**

This study is to be undertaken in partnership with Regional Public Health (RPH). Store owners will be approached personally alongside the team leader of the Regional Public Health 'Healthy Porirua Project' who has close ties to this community. This approach will support building trust, rapport and 'buy in' for the study.

A convenience sample of shop owners who are willing and available to participate will be utilized for these interviews. Potential participants will be provided with an information sheet, a cover letter and a consent form and given time to consider the information and participation in the study, prior to written consent for engagement. Participants who are undecided will be contacted at a later date to recheck their availability.

Participants will be offered a 'koha' of a \$40 petrol voucher each for their time commitment, which will be funded by Regional Public Health (RPH). At the conclusion of the study participants will also be offered a summary and recommendations from the research.

### **Analysis :**

Thematic analysis will guide the analysis to identify patterns, themes and categories which are strongly linked to the data and research questions (Patton, 2002).

The data will be read and reread closely several times so as to become familiar and to understand the content. Themes which capture something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set will be identified and coded into broad categories. These categories will be collapsed into major overall themes to form the analysis. The interpretation of the data will be done through the lenses of the researcher. This process will facilitate a process of reflection and discovery (Hansen, 2007 p. 150). Key concepts or categories will be checked utilising debriefings with a supervisor and checks with participants to support credibility of interpretations.

### **DETAILS OF ETHICAL ISSUES INVOLVED:**

Major potential ethical issues that need to be addressed include:

#### **Informing participants fully and ensuring voluntary consent**

Potential participants will be provided with an oral and written explanation of the research. A consent form will be provided and signed prior to engaging in the research. Participants will have the right to withdraw from the study at any time.

#### **Privacy of the identification of participants**

No personal data will be collected from participants. The type of store and its general location will be noted however i.e. Porirua East, Cannons Creek or Waitangirua. The privacy of owners comments will be made non identifiable by the use of pseudonyms or initials and the alteration of any other identifying factors will be used to support anonymity and confidentiality. Tapes and transcripts will be secured in a locked filing cabinet at the researcher's workplace.

#### **Misinterpretation of participants feedback**

The researcher will consider carefully how personal and professional characteristics may influence their interpretation of this research. Regular support from experienced supervisors will be sought to help reduce this risk. This will support maintaining the validity of the results, which due to their interpretive nature are only a version of the 'truth'. A request will be made to participants to be able to recontact them by email or phone for clarification about comments and its interpretation if necessary.

#### **Inconvenience and cost**

The time needed by small store owners to participate in this study has the potential to create inconvenience and opportunity costs. An offer will be made to undertake

interviews in participant's stores during a convenient time of the day to minimise these factors. Interviews will aim to be as efficient as possible and are expected to take approximately 30 minutes in duration. Participants will be asked if they can be recontacted for clarification about any comments if necessary. Each participant will be offered a 'koha' provided by Regional Public Health of a \$40 petrol voucher.

**ACTION TAKEN**

Approved by Head of Department

Approved by Departmental Committee

Referred to University of Otago Human Ethics Committee  
Committee

Referred to another Ethics  
Committee

Please specify:

.....

**DATE OF CONSIDERATION:** .....

**Signed (Head of Department):** .....

[Reference Number as allocated upon approval by the Ethics Committee]  
[2011]

**Small store owners perceptions of the factors (barriers and promoters)  
influencing the stocking, promotion and pricing of 'healthy' foods.**

**INFORMATION SHEET FOR PARTICIPANTS**

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

**What is the aim of the project?**

To explore small food stores manager/owner's perceptions about the factors (barriers and promoters) influencing the stocking, pricing and promoting of healthy foods.

This project is being undertaken as part of the requirements for my Masters in Health Sciences at Otago University.

**What types of participants are being sought?**

Store manager/owners of small convenience stores in Eastern Porirua will be sought to participate in a face to face interview.

**What will participants be asked to do?**

Should you agree to take part in this project, you will be asked to participate in  
A face to face interview with the researcher which should take around  
30 minutes  
This interview will be arranged at a time and place suitable to you.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

**What data or Information will be collected and what use will be made of it?**

Face to face interviews will be held with participants to find out their views on what factors (both the barriers and promoters) influence the stocking, pricing and promoting of healthy foods in their stores

The data collected will be used to build understanding on ways to work with small store owners to improve the stocking, promotion and pricing of healthy foods

No personal information is to be collected however the type of shop and its general location will be noted.

Interviews will be audio-taped and transcribed 'verbatim' for analysis by the researcher and Otago University supervisors

The information we obtain will be anonymous to ensure the store can not be identified. Your identity will be confidential to the research team. Transcribed material will not contain identifying information such as participant's names.

The data collected will be stored securely. At the end of the project any personal information will be destroyed immediately except as required by the university's research policy. Any raw data on which the results of the project depend, will be retained in secure storage for 5 years, after which it will be destroyed.

This study involves an open questioning technique where the precise nature of the questions have not been determined in advance but will depend on the way in which the interview develops. Consequently, although the Department of Public Health is aware of the general areas to be explored in the interview, the precise questions to be used have not been finalised. The general line of questioning will surround the factors which influence the stocking, promoting and pricing of healthy foods in your store.

In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

Participants will be asked if they can be recontacted if further clarification of comments is necessary.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity.

You are welcome to request a copy of the results of the research should you wish.

### **What if participants have any questions?**

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Vicki Robinson

or

Vivienne Ivory

Regional Public Health

Department of Public Health

Telephone Number: [3850413  
5541]

University Telephone Number:[385

[vicki.robinson@huttvalleydhb.org.nz](mailto:vicki.robinson@huttvalleydhb.org.nz)

[Vivienne.ivory@otgao.ac.nz](mailto:Vivienne.ivory@otgao.ac.nz)

This study has been reviewed and approved by the Department of Public Health,  
University of Otago.

**Small store owners perceptions of the factors (barriers and promoters) influencing the stocking, promotion and pricing of 'healthy' foods.**

**CONSENT FORM FOR PARTICIPANTS**

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. The audio-tapes will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for at least five years;
4. I may have access to the conclusions and any publications if I request them.
5. This project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops and that in the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind.
6. I do not have to answer any questions that give me discomfort, and the audio tape can be stopped at any time;
7. The results of the project may be published and available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

.....  
(Signature of participant)



# Appendix B: Interview Schedule

## Interview Schedule : 2011

### Factors influencing (barriers and promoters) the stocking, promotion and pricing of 'healthy' foods by small store owners.

Researcher : Vicki Robinson, Otago University

#### General Information

**Name:**

**Email : (for communication purposes) ??**

**Phone number : (for communication purposes) ??**

**Name of Outlet:**

**Type of Outlet:** Dairy/Small Grocery store

**Location of food outlet:**

**Position of participant in outlet management:** Owner/Manager

**Owner operated/ Franchise**

#### **Background**

People buy food from a range of stores. The overall purpose of this study is to gather information from small store managers/owners' to support us improve access to a greater range of healthy foods.

We are trying to find out about barriers and factors which might promote the stocking, promoting and pricing decisions of healthy foods e.g. the sale of more fresh fruit and vegetables or trim milk at lower costs than whole milk and whole meal breads at lower price than white breads.

#### **Interview Questions**

##### **Introductory Questions**

---

**Can you tell me what the term 'healthy food' means to you ?**

*(Tell me more about that what that means to you?)*

**How important do you think purchasing 'healthy food' is to your customers?**

**In this store what sort of demand is there for these 'healthy foods' from your customers?**

**Where else do you think your customers currently purchase these kinds of 'healthy' foods?**

**How do you see your store contributing to your customers total household food shop ?**

*Probes :*

*for treats foods mainly*

*casual last minute place to buy foods*

*some meals e.g. weekends, dinners, breakfasts*

*regular grocery purchasing*

*specific meals e.g. weekends, dinners, breakfasts*

**How would you describe the relationship you have with your customers?**

*Probes :*

*This is my community/live outside the community*

*Know many of the residents*

**How much do you see a store like this being able to influence customer's food choices?**

**Are you owner operated ? or a Franchise ?**

**How much influence do you have over the decisions made regarding stocking, promotion and pricing of foods in this store?**

*Probes:*

*Largely directed on the stocking, pricing, promotion of foods/drinks*

*Autonomy over stocking, pricing, promotion of foods/drinks*

## Stocking

---

**Can you tell me where you source most of the foods and drinks you sell ?**

**How does where you source your foods influence the choice of foods/drinks you stock in your store?**

**What other things influence the choice of foods/drinks you stock in your store?**

*Probes :*

*Customer demand/preferences including cultural*

*Staff habits*

*Price – low price for the customer or ones where most gains will be made*

*Counter/shelf space available*

*Industry promotions*

*Reliability of delivery/companies to cater for needs*

**Are there other factors that influence the stocking of 'healthy' foods in your store e.g. fruit and vegetables e.g. where they get it from and customer demand**

**or grainy breads or low fat milks?**

*Probes:*

*Customer demand*

*Seasonal availability*

*Easy access*

*Price*

*Refrigeration*

**Can you think of things that might influence your store to stock a greater range of 'healthy' foods? E.g. more fruit and vegetables, low energy drinks, grainy sandwiches and rolls.**

*Probes:*

*More refrigeration/equipment*

*Support with advertising, food labelling*

*Education/training – in nutrition or promotional skills*

*Demand*

*Incentives*

## Promotion

---

**Can you describe the methods used to promote or advertise the foods/drinks you sell ?**  
(ie If you are wanting people to buy more healthy food what would you do?)

*Probes :*

**Visibility and accessibility** e.g. close to counter, large display/shelf space,  
shelf position e.g. eye level, display stands

**advertising** placed outside the store, newspaper, radio advertising etc.

**price discounts**

**What factors influence the foods/drinks you choose to promote in your store? (how do you decide what you will promote?)**

*Probes:*

*Popularity /demand ie volumes sold*

*Price of foods e.g. Foods available on specials*

*Old stock*

*Profit possible*

**Can you think of anything that would make it easier for your store to promote more 'healthy' foods?**

*Probes:*

*Advertising subsidies for promotion of 'healthy foods'*

*Opportunities to provide samples of foods – taste testing*

*Incentives*

## Pricing

---

**Can you tell be about the factors which influence the pricing of foods in your store?**

E.g. trim milk c.f. whole milk;

wholegrain bread c.f. white bread;

fruit and vegetables

*Probes:*

*Purchase price, Profit margins*

*Industry pricing recommendations*

*Level of demand/sales*

*Competitive pricing*

**People often perceive HF as being more expensive. Would you agree with this? Why do you think this might be? (general and specific)**

**Can you think of things which would influence/make it easier for your store to price 'healthy foods' foods at same/lower prices than 'less healthy foods'**  
e.g. trim milk c.f. whole milk or wholemeal bread c.f. white bread?

*Probes:*

*Price subsidies*

*Support with advertising*

**Finally**

---

**If you were to wave a magic wand that made selling healthy food in your store profitable, would you change what you do/sell or continue in much the same way.**

## Appendix C: Cover Letter

Regional Public Health  
275 Cuba St, Wellington  
Tel 04 384 1576  
Fax 04 384 1370  
Vicki.robinson@huttvalleydhb.org.nz

Friday, 27 May 2011

Dear Store Owner

*RE: Research Project with owners/managers of small food stores in eastern Porirua*

I am a student of Otago University undertaking a research project in partnership with Regional Public Health to complete my Master of Health Sciences. The overall purpose of this study is to gather information to learn more about potential ways we can improve residents' access to healthy foods. We would like to find out from small store managers/owners' about the barriers and factors which might promote the stocking, promoting and pricing decisions of healthy foods.

I am looking for owners/managers of small convenience food stores in Eastern Porirua who would be interested in participating in this study. This will involve a face to face interview which will take about 45 minutes to complete.

If you would like to participate in this research project please read the enclosed information sheet and sign the information the consent form.

Thank you for your time and consideration for this project. Should you have any queries regarding this research please do not hesitate to contact me via the above contact details or with my Professional Supervisor, Vivienne Ivory, Department of Public Health, Otago University, Wellington, 385 5541 or [Vivienne.ivory@otago.ac.nz](mailto:Vivienne.ivory@otago.ac.nz).

Yours sincerely

Vicki Robinson  
Public Health Dietitian, Regional Public Health

## Appendix D: Interview Coding System

CODE	DEFINITION	Issues discussed - THEMES	Themes identified (step 2) – ‘Basic’
Definition of HE	Food store owners (FSO) understanding of healthy eating (HE)	Health, protection Organics, free range	
Importance of HF to customers	FSO perceptions of customers interest in healthy foods (HF)	Important	Understanding our customers needs
Customer demand for HF	FSO perceptions of the customer demand for HF	Overall lack of demand Related to cost, income, family size, health, advertising	Understanding and meeting our customers needs
HF sources for customers	FSO perceptions of customers shopping habits for HF	Supermarkets Fruit shop	
Contribution to customers household shop	FSO perceptions of their stores contribution to their customers food shop	Convenience	their role in the retail market meeting our customers needs
Customer relationships	FSO relationship with customers	Close friendly relationships	Our customers – understanding their needs
Owner operated	The store is owner operated	Mainly owner operated	
Stores influence on customers food choices	FSO perceptions of the influence of their shop on food choices	Offering foods that meet customers needs ie Filling food The right priced food HF at the right price Stocking foods advertised Having deals FS specials eg spices, fish	Meeting customers needs Retaining customers Being competitive Differentiation in the market
Influences - customer demand	FSO perceptions of customers impact on the stocking, pricing or promotion of foods choices in their store	Primary importance Customer central Quantity not quality Value for money Cost Speed of sale (past experiences)	Customers central FSO role to meet customers needs esp affordability  Meeting business needs

		meeting their needs – cultural, pricing, tastes, ‘likes’, health, affordability supply and demand	
Influences - supplier’s	Shows suppliers impact on the stocking, pricing or promotion of foods choices in their store	Proactive role of supplier from promotion, pricing and stocking Suppliers agenda Deals, running items Passive role of FSO Tailored targeting of LSE area needs Franchise responsibilities	Passive role of FSO Suppliers control - deals - pricing - promotion - stocking
Influences- Pricing/deals	Pricing and deals are said to impact the stocking, pricing or promotion of foods choices in their store	Deals Affordable foods e.g Asian foods Biggest issue – lack of customer control Competitive pricing Lower prices attract customers	Deals Affordability Lack of customer control Being competitive
Influences - Space/equipment	Space or lack of equipment are said to impact on the stocking, pricing or promotion of foods choices in their store	Refrigeration Limited space	Business limitations
Influences- profit	Profit is said to influence the stocking, pricing or promotion of foods choices in their store	We run a business Bottom line is profit Need profit Competing stores Specials impact margins	Meeting business needs Being competitive
Influences- competition	Competition from other stores is said to impact on the stocking, pricing or promotion of foods choices in their store	Many stores selling the same Smaller volumes, higher costs Customers shop around	Being competitive esp financially
Source of food	FSO sources of food stocked	Wholesalers The Warehouse Moore Wilsons, Toops Food stuffs Supermarkets	Supplier control
Promoting practices	Promoting practises used by FSO	Suppliers influence	Setting the right price



		Pricing Volumes Selling in 2-3s Posters Boards, 'in store' promotion No outside advertising	Passing on deals Supplier control Limited marketing practises
Is HE more expensive ?	FSO perceptions of the cost of healthy food (HF)	Yes	Lack of control
Reasons for higher prices	FSO perceptions of the factors influencing the cost of HF	Suppliers set pricing Better/premium /healthy ingredients Volumes sold NZ made more expensive Pay for what you get Balancing of costs	Lack of control Govt role
Solutions – education	FSO perceive education as a way of improving HF choice	Educating Habits hard to change Advertising Labelling	Lack of control Govt role Customers lack of knowledge
Solutions – customer demand	FSO identify the need to influence customer demand as a way of improving HF choice	Increased sales needed Customers choose what they buy Healthy foods at lower price Concern re price and demand	Affordability Customers control
Solutions – government	FSO identify government as having an influence on HF choice	Systemic issues Asian imports Free trading Only ones with the key to change GST, excise taxes Deregulation	Govt control
Solutions-suppliers	FSO identify suppliers as having an influence on HF choice	Change by suppliers and manufacturers practise Cheaper 'healthy foods'	Supplier control
Solutions – pricing	FSO identify pricing as having an influence on HF choice	Need for lower prices and more demand to maintain profit	Moving control from suppliers to FSO and customers
Solutions –taste	FSO identify taste as having an influence on HF choice	Only useful if affordable	

Basic themes	Organising themes	Global themes
<p>Understanding and meeting 'our' customer needs            FSO role in the retail market</p> <ul style="list-style-type: none"> <li>- providing for customers in this community</li> </ul> <p>Meeting business needs</p> <ul style="list-style-type: none"> <li>- customers central /retaining customers</li> <li>- Affordability</li> <li>- being competitive</li> <li>- Differentiation from others</li> </ul>	<p>Being a good shop keeper</p>	<p>Business model</p>
<p>FSO Passive role</p> <ul style="list-style-type: none"> <li>- Government control e.g taxes, GST</li> <li>- Suppliers control e.g pricing, promotion</li> <li>- Customers control (lack of income, education, taste)</li> <li>- Control of business needs</li> <li>- Absence of marketing practices</li> </ul>	<p>Lack of control</p>	<p>Complexity of environmental influences on FSO</p>
<p>Appropriate pricing (to be competitive, to meet customer needs, to reflect suppliers)</p> <ul style="list-style-type: none"> <li>- stocking items that meet price needs</li> <li>- passing on deals</li> <li>- competitive pricing</li> <li>- setting prices</li> </ul>	<p>Appropriate pricing</p>	

# Appendix E: Declaration Form



**DECLARATION CONCERNING THESIS PRESENTED FOR THE DEGREE OF**

**MASTER OF .....**

*I, .....* (full name)

*of* ..... (address)

.....

*solemnly and sincerely declare, in relation to the thesis entitled:*

.....

.....

(a) That work was done by me, personally

*and* (b) The material has not previously been accepted in whole, or in part, for any other degree or diploma

*Signature:* ..... *Date:* .....

*To be included in Soft Bound copies only*