

## **Attitudes and Behaviours toward Healthy Eating and Food Safety in Ho Chi Minh City, Vietnam**

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### **ABSTRACT**

This paper is based on qualitative research conducted between 2013 and 2015 in Ho Chi Minh City (HCMC), Vietnam, to explore its people's attitudes and behaviours toward healthy eating and food safety, the discrepancy between attitudes and behaviours, and the factors affecting them. A total of 69 respondents were interviewed for this purpose. Results showed that i) healthy eating and food safety have become a more pressing concern in HCMC, which was welcomed by both food producers and business people; ii) there is a considerable gap between people's cognition, attitudes, and behaviour; and iii) people's financial capacity, their knowledge, and especially mass media and food quality control by the authorities have a significant impact on raising awareness of healthy eating and food safety, positively altering food choices and eating behaviours. This study is important as it reveals people's understanding of healthy eating and food safety in Vietnam, and which can serve as a basis for further research.

*Keywords:* Attitudes, behaviours, food safety, healthy eating, Ho Chi Minh City

### **INTRODUCTION**

Food is both a source of nutrients and energy as well as a cause of ailments

and adverse health. Such ailments are often a result of unsafe cultivation and production processes, careless cultivation, poor processing practice, and inappropriate storage. In Vietnam, this problem has caused increasing anxiety among consumers as both imported and domestic food choices in the market have increased dramatically while ensuring food quality has remained ineffective. Against this background, a qualitative research project (observation

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and interviews with secondary analysis of existing data) was conducted (2013–2015) in Ho Chi Minh City (henceforth HCMC) to explore the attitudes and behaviours of Vietnamese consumers towards healthy eating and food safety, the discrepancy between attitudes and behaviours, and the factors affecting them.

## **THEORETICAL FRAMEWORK AND BACKGROUND**

### **Concepts**

*An attitude* is “a relatively enduring organization of beliefs, feelings, and behavioral tendencies toward socially significant objects, groups, events or symbols” (Hogg & Vaughan, 2005). Attitudes can be broken down into three components in what is known as the “ABC model”: the *affective*, *behavioral* (or *conative*), and *cognitive* components.

While attitude involves the mind’s predisposition to or against certain ideas, values, people, systems, or institutions, behaviour relates to the actual expression of feelings orally and/or through body language, as well as action or inaction. One assumption about the link between attitudes and behaviour is the principle of *consistency*, as shown in a study by LaPiere (1934).

*Healthy eating* means consuming the right quantities and proportions of foods from all food groups in order to lead a healthy life. *Food safety* refers to all those hazards, whether chronic or acute, that may make food injurious to the health of the consumer. According to Law No. 55/2010/

QH12, the “Food Safety Law” of Vietnam, food safety consists of making sure food is not harmful to health or human lives.

## **LITERATURE REVIEW**

### **Health Attitudes, Behaviours and Changes**

The theory and model of health belief focus on an individual’s attitudes toward a set of conditions or of their own health behaviours, and their subsequent willingness or ability to make changes to improve or protect their health (Nutbeam & Harris, 2004). Behavioural change has been described as a process with five stages: Pre-contemplation, Contemplation, Preparation (or Determination), Action, and Maintenance; from the Maintenance stages, an individual can either consolidate the change or relapse; however, the stages are circular and relapse does not necessarily mean failure—an individual may move through the stages many times before successfully consolidating a change (Prochanska & DiClemente, 1984). The social cognitive theory is used by many scientists studying attitudes and behaviours (Bandura, 1995; MacDowell, Bonnell, & Davies, 2006).

### **Factors Affecting Attitudes and Behaviours toward Healthy Eating and Food Safety**

Theories of behavioural change highlight the importance of examining knowledge and attitudes in order to develop interventions in an attempt to facilitate or prevent change

(National Obesity Observatory, 2010). Numerous studies have been conducted to identify determinants of healthy eating. A systematic review (Allender, Cowburn, & Foster, 2006) identified social interaction and building of social networks as important factors across all groups and ages, particularly among children and older adults.

### **Healthy Eating and Food Safety in Vietnam**

There is a lack of research on attitudes and behaviours toward healthy eating and food safety. However, there are many articles in the mass media on how people fall sick due to poor eating habits and food poisoning in Vietnam. In 2015, the country recorded 171 food poisoning cases affecting nearly 5,000 people; these high numbers stem from the fact that Vietnam imports 4,100 types of pesticides and 1,643 different chemical ingredients, 90% of which come from China, according to Professor Nguyen Lan Dung, President of Vietnam's Association of Biological Sciences. He made this remark at a forum titled "Welcoming clean food" organised by Ministry of Agriculture and Rural Development (DARD) on 23-8-2016 in HCMC (People's Police Newspaper, August 24, 2016). It is impossible to control how farmers use these products. In a recent inspection, the National Institute for Food Control (NIFC), found 40/120 vegetable samples to have excessive levels of chemical pesticides, while 455/735 samples of meat products unsafe for consumption. In Vietnam annually, an average of 150,000

people are diagnosed with cancer and 75,000 people die from it; it is estimated that about 35 percent get cancer from consuming "dirty" food (VnExpress, August 25, 2016). According to Quality Vietnam (VietQ.vn, November 3, 2016), 10 food poisoning cases in particular have shaken public confidence in the food trade. One of the main occurrences was a mass poisoning in HCMC on March 5, 2013, when over 1,500 workers at the Vietnam Terratex Company (operating in Tan Thoi Hiep industrial park, district 12, HCMC) became seriously ill, and suffered from vomiting, abdominal pain, diarrhoea, headache, dizziness after consuming a prepared meal.

The increased publicity and public concern over food safety and healthy eating in Vietnam have attracted the attention of researchers. (Bui & Schreinemachers, 2011; Ziv, Baran, Nam, Rodrigues-Iturbe, & Levin, 2012). Most have focused on issues in food production. For example, a 2010 study in a village near Hanoi specialising in producing sorghum and dried noodles showed that 15% of production facilities were located next to pigsties; 100% of the products were dried in bamboo grills adjacent to a dusty roadside and near open sewers; 60% of production materials had unpleasant an odour, and were unhygienically stored in sacks; more than 50% of households used bleach powder containing harmful chemicals for health such as sodium hydrogen sulphate, chloral hydrates, and potassium permanganate. The lack of knowledge of the risks of these practices among the villagers puts customers at risk of food poisoning, according to the

Tien Giang Province website. (Center for Rural Youth Development. Updated: 20 December 2016).

Nguyen and Moustier (2015, p. 67) noted that, during the past 20 years, the food sector in Vietnam has undergone major changes: a person can easily purchase foodstuffs from a variety of sources, ranging from street vendors to air-conditioned supermarkets, with shops and fixed market stalls in between (Figuié & Moustier, 2009). However, consumer surveys have shown that residents of Hanoi purchase produce mainly from street vendors due to their low price, freshness, and proximity to their homes (Figuié & Moustier, 2009). Street vendors in turn source vegetables mostly from wholesale markets (in urban areas) and partly from their own vegetable plots. In 2009, vegetable street vendors supplied 32% of the total vegetable volume sold to consumers, compared with 58% from retail markets, 9% from shops, and 1% from supermarkets. In 2014, approximately 45% of vegetables were sold by street vendors, 49% at retail markets, and only a limited volume at stores (3%) or supermarkets (3%). This phenomenon is explained by the movement of vendors from official to unofficial markets, especially along the roadsides near factories, schools, or in front of someone's house or a store, to avoid having to pay increasingly high fees shopping at renovated formal markets (Nguyen & Moustier, 2015, p. 71). In particular, people tend to prefer vegetables that originate from peri urban areas where production conditions have been certified

as "safe" by Hanoi authorities (Nguyen & Moustier, 2015, p. 74).

## **MATERIALS AND METHODS**

### **Methodological Perspectives**

The Policy Studies Institute (2009) investigated a variety of issues relating to healthy eating and food safety. Some of its more important conclusions are as follows: i) food-related behaviours are of low saliency for those responding to questions in food surveys; ii) Lines of questioning should be as specific as possible, for example, asking about particular recent behaviours; iii) social desirability biases are likely in responses to food-related survey questions; and iv) such biases should be reduced mainly through good question design and survey practices. It was also recommended that questionnaire development should be based on social scientific theory, and that surveys should seek to capture not just food-related behaviours but also the psychosocial factors that have an impact on them (d' Ardenne, McManus, & Hall, 2011, p. 6).

### **Methods and Instrument**

Qualitative research methods were employed in this study (FSA, 2009) and information was collected through in-depth interviews and observation. Questions were adapted from Policy Studies Institute (2009) to investigate attitudes and behaviours toward healthy eating and food safety in the Vietnamese context. It is useful to explore changes over time to capture the processes through which individuals make choices

regarding the food they purchase and eat, and thereby to identify causal factors.

Participants were asked where they usually buy their raw foods (at traditional markets, supermarkets, etc., or from specialised stores run by food companies) as well as where they eat outside the home, for example at restaurants or street food shops. The authors also observed consumer choice of food at traditional markets and supermarkets. However, a problem was experienced during the data-collecting process: respondents generally answered based on perceived expectations rather than their actual practices, because people usually want to project positive images of themselves. To address this, the authors combined verbal interviews and observation data when describing research results.

## RESULTS AND DISCUSSION

### **Finding 1: Healthy eating and food safety have become more pressing than ever before. This demand has been eagerly welcomed by producers and business people**

Healthy eating and food safety have become a main concern of the majority of Vietnamese people. This is an inevitable result of the rise in living standards enjoyed by Vietnamese 30 years after the implementation of the *doi moi* economic reforms in 1986. There is now a wide range of domestic and imported foods, and food sellers have sprung up everywhere. One effect of this rapid transformation is a “choice-based syndrome” that combines increased

opportunities and options with declining certainty and safeguards, embracing the paradoxical, contradictory, and conflicting qualities that emerge:

*Perhaps the hardest thing for me is to make a decision what to eat today? I have enough money, a lot of goods and it is difficult to buy what food is available in this bazaar that can be good for us. I'm always thinking of the most delicious foods and the most beneficial to health for my family. I do not care about the price. (Housewife, 57 years old, Binh Thanh District)*

*Why are so many people sick? Previously [we were] poor but not many people suffered from diseases. There was little to eat but [we were] healthy. Now having a lot of things to eat [is] not only making us fatter but also unwell. (Worker, 45 years old, 7 District)*

*I wake up at 5am to shop at the Tan Dinh market near my house. I usually buy from the vendors who get their products from the farmers in the suburbs of Saigon. I have become familiar with them. Their products are good, cheap ... I buy them based on trust ... Retired, I spend most of my time in the market only to buy food and cook for my husband and children ... Someone told me there are*

*places that sell clean vegetables and delicious meat, so I go there to buy ... I sometime take the bus to the Cu Chi District to buy at a chicken farm, known as vegetarian chicken [because of its feed]. From the day we ate that chicken, we could not eat chicken bought at the market. (Housewife, 55 years old, 3 District)*

Along with the rising tendency to eat “health food” is the taste for delicacies. Families now often ask “What to eat? Where to eat? How to eat? Eat with whom?” Naturally, food traders have attempted to profit from these anxieties and wants of consumers.

*Everyone wants good food, the more money, the more the demand for good food. Fertilisers are used to induce quick growth of vegetables which also look good. The increasing sales and profit has motivated farmers to use more stimulant factors. (Man who grows vegetables and bean sprouts, 12 District)*

*One day I heard on TV that they had spotted a farmer spraying excessive pesticides on his vegetables ... a pig breeding household used bran mixed with growth hormone stimulant, mixing antibiotics and substances into lean meat for their pigs to eat ... these are substances that can cause cancer ... Then*

*where can we buy fresh vegetables, clean pork? We are very confused. Who protects us from unsafe food? (Female staff woman, 35 years old, 2 District)*

### **Finding 2: There is a considerable gap between cognition, attitude, and behaviour**

A marketing expert once said that if you ask anyone whether they need to eat clean food, safe food, healthy food, they will surely answer “yes.” However, to create a habit of consuming clean and safe foods daily is still an uphill battle for many reasons, including the expense. Prices of fresh foods at bazaars are much higher than those sold at markets and supermarkets; but buying food in the bazaars is still the choice of many Vietnamese, who like eating raw and fresh produce brought directly from the producer. A woman told us that:

*I am very concerned about health. I purchase clean and fresh foods only to cook ... I eat seasonal fruit every day ... Please, look at my refrigerator [she then opened the refrigerator].*

At a glance, the quality of foods did not seem as good. We asked her: *Where did you buy these things?* She seemed a little embarrassed and said the following:

*I shopped a little late yesterday ... It was not good. I had to buy this pork ... This was not very fresh*

*shrimp, but its price was cheaper and I bought it.*

We spoke with a couple, in which the wife worked in an office and the husband was a businessman. They were young, without children, and had significant disposable income. However, they were always short of time to buy food and cook dinners for themselves at home, and so they dined out at approximately four days weekly. They know that street food can be of poor quality, and that they could have been poisoned (at a mild level) after eating crabs in such a setting, but nevertheless they have not practised the habit of “healthy eating and food safety.” Why? Here is one story:

*My mother told me that it was the habit of Saigon [Ho Chi Minh City] people to have dinner at restaurants. Where to eat was according to their financial capacity. I remember that once as a child, my family used to have dinner at a small restaurant near my house. On important dates such as birthdays, our family had dinner at luxurious restaurants. It was popular for everyone to have dinner outside their home, whether they were rich or poor. The cost for a meal out is not more expensive than that [of one] made at home. At that time, no one was poisoned by eating contaminated food.*

*I have been poisoned after eating crab... It is difficult to make dinner*

*at home after a stressful day of work ... I tried, but have not yet done it. Many of my colleagues suffer [much like] me. As you can see, from 6 pm onwards daily, all kinds of food outlets from big to small, are packed with all kinds of people.*

Those wishing to have dinner outside their homes have many choices in HCMC. It can be said that there is no street in HCMC that has no restaurants or unable to meet the needs of all social groups. They are diverse in food quality and price. Restaurants do not operate under the same rules, in which “price depends on the quality.”

**Finding 3: Control by the authorities had a significant impact on raising the awareness of healthy eating and food safety, fostering change in habitual behaviours in food choices and eating**

There are many media programmes on safe food choices in addition to many NGOs working to create better awareness on this.

*I hear the programme “Say NO to dirty food” on TV. It runs at 7:20 am and 20:50 pm daily. So, I can discover how dirty pork is, how dirty vegetables is, though they were very beautiful [in] form and, where can I buy good things. There is a growing number of shops selling “green food,” so I can easily buy high-quality food there. But the number of people buying food there is not much for the high price. It is*

*still a habit of the majority to buy foods at bazaars. (Housewife, 56 years old, District 3)*

*I will never buy meat called "processed local specialties" on sale in tourist places anymore. I saw images yesterday on TV of a household who took dead pigs and then "processed" them to be sold in tourist Tay Thien Temple areas. This took place for many years. There were 5 stalls at resorts selling that kind of meat. I could not believe it. (Male bank staff, 35 years old, 2 District)*

The Green-Kindness Bazaar is an example. This fair began its operations in May 2016, and runs regularly on the first and third weekends of each month at the Business Research and Business Support Center - BSA Center, 163 Pasteur avenue, 3 District, Ho Chi Minh City, with the participation of a growing number of gardeners, cooperatives purchasing organic food, consumers, people wishing to learn about clean and safe food as well as food product manufacturers who want to learn about using safe, nutritious food among others. With the permission of the fair organisers and the consent of the attendees, we conducted a discussion with them and explained to them the purpose of this interview work. A young girl said:

*We want to know, how to distinguish organic vegetables and vegetables with chemical spray? I go shopping*

*daily, cooking, planting trees also at home, I thought that I can know the difference between organic vegetables, vegetables with chemicals, but I am still not confident. I want to hear the experiences of those who grow organic vegetables to supplement my knowledge. (Housewife in District 3)*

*I used more than 10 kg of salt monthly for washing vegetables. I only buy vegetables in supermarkets, but still have doubt whether beautiful and green-coloured vegetables are vegetables with chemicals. (Old woman)*

An engineer who grows organic vegetables in Cu Chi, in suburban HCMC, said:

*Yes, it is difficult to distinguish what the organic vegetable is. Using chemicals for pest control, the leaves of vegetables are green and very smooth. However, vegetables grown in areas as Dalat, though not using chemical sprays, pesticides, leaves of vegetables still are green ... I am an organic vegetable grower and my ability to discriminate is 50% only. Based on my experience, the majority of 'safe' vegetables have smaller leaves than normal, and they are dark green. Safe vegetables and fruits will be uneven in size.*

A man said:

*The only way is to buy fruits and vegetables, food that we know its origin and we can put our trust in.*

*more important than touching, it is the belief. There are more and more young producers who are interested in producing safe food. Thus, we must support them.*

A woman agreed with that opinion, and said:

*Yes, we now buy everything based on trust. Years ago, Vietnamese people lacked food but could eat clean food. Now there are too many choices but not clean ... paradoxical ... why...?*

Another woman agreed:

*I regret that a fair like this is too few, few people provide goods and [there are] few consumers too.*

A host of householders growing organic vegetables in Dalat province said:

*I do not dare leave my vegetable garden for one day, as I worry if I was away, the workers, because of chasing the [production] target and the number of products, will be spraying into vegetable beds. If they do, it will make our vegetables unsafe, and consumers who eat them may become sick and our brand reputation will be reduced. Engineers, architects use a mixture of garlic, chili, and wine to repel pests in their vegetable garden. Their vegetables are very safe.*

One older man concurred:

*I hope that more and more business people and producers are accountable to the community. State management is so weak compared with the dirty food matrix. Everyone must equip themselves with the knowledge to save themselves.... So, I often come to this Green-Kindness Bazaar because eating vegetables here is more delicious than eating vegetables bought in other places. At this fair, I meet buyers and manufacturers directly, hear them talk about the process of planting and caring for these products. The atmosphere of is very fun.*

A housewife concluded:

*After a month of shopping at this fresh vegetable fair, I can know the quality of fruits and vegetables thoroughly just by looking at them;*

The above indicate that factors affecting food safety purchase decisions are related not just to income but also to understanding and knowledge of healthy food consumption. When shopping at green bazaars for vegetables and fruits, consumers

compare these experiences with buying foods from supermarkets and markets. They will gradually learn to identify clean, safe products. In time, when they become accustomed to clean food and attain sufficient prosperity, they will eat safe food regularly.

## CONCLUSION

The living standards of Vietnamese people have improved rapidly over recent decades, and “healthy eating” has become a high public priority. The findings of this study are: i) Healthy eating and food safety have become a pressing concern in HCMC because monthly average per capita income as at 2014 increased four times compared with 10 years ago (4,839.7 *dong* compared with 1,164.8 *dong* in 2004), of which about 50% accounted for eating, drinking, and smoking expenditures (Statistical Office in HCMC City 2015). Those who have the financial capacity eat healthy food and a good proportion of it. This demand has been eagerly welcomed by producers and businesses. Demand for “healthy eating” has stimulated producers to increase their production to meet consumer needs to boost profits. ii) There is a relatively large gap between cognition, attitude, and behaviour in this context. Due to lack of understanding on quality indicators related to clean food, inappropriate attitudes and behaviours toward healthy eating and food safety may occur, as people rely on heuristics and biases to reduce their cognitive load of daily decisions. iii) In addition to growth in wealth, increases in knowledge, visibility in media, and good food quality control by

the authorities have had significant impacts on raising the awareness of “healthy eating and food safety” to alter dietary behaviours in food choices and eating. Food safety programmes are increasingly focusing on a farm-to-table approach as an effective means of reducing foodborne hazards (Food and Agriculture Organization & World Health Organization, 2003). The National Strategy for Food Safety 2011-2020 and Vision 2030, which sets out many targets for achieving food hygiene and safety, is a culmination of the growing demand for clean food in Vietnam (Law Newspaper, December 7, 2012). Achieving the goal of “food safety and healthy eating” requires integrated solutions to raise awareness, improving the attitudes of consumers, producers, and distributors and incentivising them to practice a reasonable and sensible dietary behaviour.

The findings of the present research point institutional factors (such as mass media, education, and control and management of food quality) having a particularly important role in the transmission of knowledge-building attitudes and directing and controlling the behaviour of consumers, producers, and traders. Health is important both to the individual and society. This study contributes to our understanding of healthy eating and food safety in Vietnam and ways to encourage it.

Evidence also suggests women are more likely to be influenced by social expectations. To get accurate and convincing statements, each oral interview was verified through observations. The action-research model

used here shows the value of gathering rigorous qualitative data on relevant attitudes and behaviours.

The findings of this study are limited in its generalisability. In order to identify behavioural patterns and measure their impact on “healthy eating and food safety,” it is necessary to combine quantitative and qualitative methods, along with surveys of different target groups. Findings from such research will be able to inform policymakers and managers and help them build effective intervention mechanisms.

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