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The interaction between marketing dynamics and the perception of healthy food choices

Shalini Perera
Edith Cowan University

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**The interaction between marketing dynamics and the
perception of healthy food choices.**



By

Shalini Perera (10093721)

Bachelor of Business (Marketing and Management)

A thesis submitted in partial fulfillment of the requirements
for the award of

Bachelor of Business with Honours (Marketing)

Faculty of Business and Law, Edith Cowan University

Supervisor: Dr Kate Mizerski

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USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

Abstract

The present focus on healthy living has created many business opportunities including the health food market. With the increase interest and the rapid growth, many significant changes with regard to people's perception and interactions with food choices are inevitable. Therefore, this study seeks to expand the marketing literature with regard to interaction between marketing dynamics and perceptions of healthy food choices.

The sample consisted of 150 survey questionnaire respondents. The unit of analysis for this research was identified as the Edith Cowan University and therefore the sample was drawn from within the university. The research framework for the study was aimed at examining people's perceptions and consumer needs with regard to healthy foods; demographic and psychographic influences on healthy food choices; and the impact of personal value and culture on healthy food perceptions. The data collected were analyzed using SPSS and various techniques such as Factor analysis, Regression analysis, ANOVA and T-tests were used to examine the statistical significance of the data.

However the results indicated both consistent as well as inconsistent findings with the existing marketing literature as well as new findings contributing to better understand the health food market. Further, this study will provide findings that can be used to develop regulations aimed at controlling food advertising as well as help build a health conscious society by increasing awareness of how to lead a healthier lifestyle through food choices.

Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

- i. Incorporate, without acknowledgement, any material previously submitted for a degree or diploma, in any institute of higher education;
- ii. Contain any material previously published or written by another person except where due reference is made in the text; or
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Signature:

Date:25/08/2010.....

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Table of Contents

Abstract	2
Declaration	3
Acknowledgements	4
Table of Contents	5
List of Tables	8
List of Figures & Appendices	10
1. Introduction	11
1.1 Purpose of Study	12
1.2 Research Objectives	12
1.3 Research Questions	13
1.4 Expected Outcome	13
1.5 Significance of Study	14
2. Literature Review	16
2.1 Introduction	16
2.2 Previous Research Related to Food Choices	17
2.2.1 The Health Lifestyle Segment	17
2.2.2 Perceptions of Healthy Eating	19
2.2.3 The Consumption Meaning Model	23
2.3 Demographic Factors Affecting Food Choices	24
2.3.1 Level of Impact on Food Choice By Age	24
2.3.2 Level of Impact on Food Choice By Gender	27
2.3.3 Level of Impact on Food Choice by Level of Education	29

2.3.4	Level of Impact on Food Choice by Income	32
2.4	Psychographic Factors Affecting Food Choices	33
2.4.1	The Conceptual Model	36
2.5	Impact of Culture on Choice of Food	38
2.6	Impact of Personal Value on Food Choice	40
2.7	Research Gaps	45
2.7.1	Perceptions of Healthy Eating	45
2.7.2	Culture and Its' Impact on Food Choices	45
2.7.3	Motivations Affecting The Food Choice Decision	
	Making Process	46
2.8	Summary of The Literature Review	48
3.	Research Framework	50
3.1	Learning Theories	51
3.2	Hypothesis Development	53
4.	Research Methods	58
4.1	Research Design and Approach	58
4.2	The Sample and Sampling Process	58
4.3	The Development of The Research Instruments	59
4.4	Data Collection	61
4.5	Data Analysis	61
4.6	Ethical Considerations	62
5.	Results	63
5.1	Description of Sample	63

5.2	Research Questions and Findings	65
6.	Conclusions, Implication and Future Research	89
6.1	Review of The Study	89
6.2	Implications of The Research	93
6.3	limitations of this study and suggestions for future research	95
6.4	Conclusion	96
	References	103
	Appendices	97

List of Tables

Table 1: <i>Age and gender of the sample population.</i>	64
Table 2: <i>Average income of the sample population.</i>	64
Table 3: <i>The highest level of education obtained of the sample population.</i>	64
Table 4: <i>Perceptions of healthy eating and the difference between gender and age.</i>	66
Table 5: <i>Perceptions of healthy eating and average income per annum.</i>	67
Table 6: <i>Perceptions of healthy eating and the level of education.</i>	68
Table 7: <i>Perceptions of healthy eating and continent of primary residence.</i>	70
Table 8: <i>Response rate for the statement "Good health is influenced mainly by factors over which the individual has no control".</i>	71
Table 9: <i>Response rate for the statement "Most illnesses can be avoided if you take the right steps".</i>	71
Table 10: <i>Rotated component matrix.</i>	72
Table 11: <i>The relationship between the statement "Good health is influenced by factors over which individuals has no control" and cultural values.</i>	74
Table 12: <i>The relationship between the statement "Illnesses can be avoided if the right steps are taken" and cultural values.</i>	74
Table 13: <i>The relationship between the statement "Good health is influenced by factors over which individuals has no control" and demographic factors.</i>	77
Table 14: <i>The relationship between the statement "Illnesses can be avoided if the right steps are taken" and demographic factors.</i>	77

Table 15: <i>The relationship between changing one's diet and motivational factors.</i>	78
Table 16: <i>The relationship between the statement, "If there was more variety, I would enjoy eating healthy" and demographic factors.</i>	80
Table 17: <i>The relationship between the statement, "I am interested in trying new foods or combinations of ingredients" and demographic factors.</i>	80
Table 18: <i>The response rate for the statement, "I tend to follow what others think is healthy rather than what I consider is healthy".</i>	82
Table 19: <i>The response rate for the statement, "It's hard to get excited about healthy foods when I don't see any results fast"</i>	83
Table 20: <i>The response rate for the statement, "I always practice what I learn about nutrition".</i>	84
Table 21: <i>The relationship between the question, "Do you consider to be living a healthy lifestyle?" and the question, "How often do you include a wide range of healthy food items in your diet?" and the statement "I always practice what I learn about nutrition".</i>	85
Table 22: <i>The relationship between the statement, "I always practice what I learn about nutrition" and the statements, "I tend to follow what others think is healthy rather than what I consider is healthy" and "It's hard to get excited about healthy foods when I don't see any results fast".</i>	86
Table 23: <i>The difference between the response rate for the barriers to eating healthy and gender and age.</i>	87

List of Figures

Figure 1: <i>A tentative framework model for analyzing health consumption meanings.</i>	23
Figure 2: <i>Conceptual model for the relationship between social values, types of needs and purchase behavior.</i>	37
Figure 3: <i>Annotative ladders and conceptual means–end structure for choices that a consumer makes for breakfast at home.</i>	44
Figure 4: <i>Research framework model.</i>	50

List of Appendices

Appendix A: Personal interview questions	97
Appendix B: Survey questionnaire	98

1. Introduction

Focusing on healthy living and providing ways to avoid health risks provide an endless source of inspiration for marketers and advertisers. The health marketplace offers a very lucrative business for many companies as is evidenced by the growth in the health lifestyle industry. For example, the volume of health soft drinks has increased by 50% during 1987–1997 (Dawson, Marshall & Shiu 2004). In addition, many new industries were established in Australia in the late 1980s and 1990s to take advantage of emerging market opportunities. Crops in the fruit and vegetables industry such as Asian vegetables, nashi pears, lychees, olives and herbs were introduced. New aquaculture activities, such as the farming of Atlantic salmon and growing out of wild caught southern bluefin tuna, were established (www.dfat.gov.au). These products were all aimed at a more health conscious consumer.

Government authorities also have stressed the importance of the food-choice-health linkage, and it appears that consumers have internalized this education to a great extent (Luomala, Paasovaara, & Lehtola 2006). Hence, studies conducted in different countries indicate that health is consistently ranked among the top values. Members of Australia's preventative health task force say a marketing failure in the food sector has contributed to the alarming rate of obesity in the country. In Australia, nearly three in every 10 children are classed as overweight or obese and more than seven million adults tip the scales as overweight (www.abc.net.au). Therefore it is important for policy makers and food marketers to take a leadership approach in promoting healthy eating to all Australians and thus improve the health and well-being of the population; reduce the prevalence of

nutrition-related chronic disease; and improve nutrition-related health outcomes of vulnerable groups.

A healthy eating pattern is identified as fundamental to the maintenance of good health and well-being. Healthy eating benefits almost every aspect of ones' health. While many Australians enjoy a varied and healthy diet, there is still considerable room for improvement. Health problems that are linked to poor eating patterns such as heart disease, type 2 diabetes and some cancers, place an enormous burden on individuals, families and society as a whole (www.health.gov.au).

1.1 Purpose of the study

This study aims to understand how people perceive and interact with healthy food choices. In addition, this study will investigate the gaps within the literature providing insight as to how people relate to healthy food choices and seeks to extend the previous studies by investigating the relationship between people's perception of healthy foods and learning theories, the inter-cultural impact on food choice and consumer needs as well as the impact of availability of varied health food options.

1.2 Research objectives

The objectives of the current research are as follows:

- To determine how people perceive and interact with food choices
- To gain insight into the process of learning that affect people's healthy food choices.
- To understand the motivational aspects that will affect people's food choices.

- To appreciate the interaction with healthy food choices within a cultural context.

1.3 Research questions

To fulfill the objectives, the following research questions were formulated:

- How do people perceive and interact with food choices?
- What motivational aspects will have an impact on people's food choices?
- How will availability of more choice of food impact on people's decision making with regards to maintaining a healthy lifestyle?
- Why are people's perceptions of healthy foods inconsistent with their behaviors and do learning theories such as social and operant learning have any link with the inconsistency of nutritional knowledge put to practice?
- What barriers exist to influence people's healthy eating behaviour?

1.4 Expected outcome

There are several outcomes expected with the successful completion of this research project. Firstly, this study will provide information as to how people form different perceptions of healthy foods and the basis of learning involved in the process. Secondly, this research will outline the relationship between demographic, psychographic and motivational factors and consumption of food. Thirdly, it can offer a basis to better understand the link between inter-cultural values and food consumption needs. Finally, the study will help increase awareness of healthy food consumption and the importance of leading a healthy lifestyle.

1.5 Significance of study

Perceptions of healthy eating can be considered as one of the many factors influencing people's eating habits (Claude & Paquette, 2005). Information on perceptions of healthy eating and on the influence of messages from diverse sources such as food companies, health professionals and the media will help marketers looking to expand the market for healthy lifestyle products, with essential information to assist their future promotions to successfully attract and retain a loyal customer base. Also having a better understanding of how people learn and how the process of learning effects the perceptions of healthy food choices will help marketers to plan their promotional mix to suit the target market.

This study will also look into the influence of culture in relation to socially acceptable choice of foods. This will help marketers understand inter cultural differences when promoting food choices and how to effectively select their target market and position their products accordingly.

With the present focus on the obesity epidemic and the subsequent cost to the Australian medicare system, obesity has been identified as a major contributor to the global burden of chronic disease and disability. Around the world, levels of childhood obesity have been rising for a number of reasons including the fact that children are eating more foods that are high in fat and sugars and spending less time on physical activity. Obesity not only has significant health and social impacts, but also considerable economic impacts. In 2008, the total annual cost of obesity for both children and adults in Australia, including health system costs, productivity and career costs, was estimated to be around \$58 billion

(www.abs.com.au). Therefore these findings will have a significant impact on the way food is marketed in the 21st century to be compatible with the changing trends of the health foods market. Finally, this study will also provide findings that can be used to develop regulations aimed at controlling food advertising as well as help build a health conscious society by increasing awareness of how to lead a healthier lifestyle through food choices.

2. Literature review

2.1 Introduction

The growth of technology has led to an increased pace of life and food choices have proven to be the most compromised lifestyle factor, giving rise to convenience based fast foods than healthy food options. As a consequence, a myriad of health problems have arisen and there has been an exponential increase in obesity and weight related health problems. Therefore, with changing consumer trends of cherishing the health of the body and the mind to overcome this situation, the health foods market has become a growing industry. According to Kwok, Nancarrow & Wright (2001), food has a range of functions such as, acting as a pastime for personal indulgence or as a focus for socializing with family, friends and others and in contributing to a general sense of individual and national well-being.

A study by House, Levy-Milne & Su (2006) found that a common theme for influence on food choices was family, upbringing, and culture: If you grow up eating healthy foods, then you're going to keep going with that. Taste preferences and cravings influence what people choose to eat. Body image was another factor that influenced food choices. From the consumer's point of view, there exists a great need for products, services, and experiences that facilitate health and prolong the duration of human existence (Luomala, Paasovaara, & Lehtola 2006). Personal food choices are structured by a variety of individual determinants of behavior, ranging from one's demographic state, food preferences, nutritional knowledge, perceptions of healthy eating and psychological factors (Raine 2005).

Therefore this literature review assesses information from studies conducted to investigate the healthy lifestyle segment, people's perceptions of healthy eating, demographic, psychographic, cultural motivations and personal values leading to consumption of food and in particular, health food. Theories such as the consumption meaning model, the conceptual model, and the means-end theory used by researchers to conduct and present their research findings will be examined in light of their importance and limitations. Finally, research gaps which arise due to limitations of current research such as lack of availability of information with regard to healthy foods and health meanings and errors in the theoretical framework used will be identified. These research gaps will then be used as the basis to form a theoretical framework for future research.

2.2 Previous research related to food choices

This section of the literature review will discuss the research findings of studies previously conducted. Consumer perceptions of healthy eating will be addressed by investigating the factors that affect healthy eating such as, demographic factors and psychological factors. In addition, motivational aspects arising from personal values and culture will be investigated. These factors will be further explained with the use of different theories and models used in previous research which will highlight the importance and also the limitations of using these concepts.

2.2.1 The health lifestyle segment

In recent years, lifestyle factors have become important and are applied widely in describing how consumers make food decisions. The lifestyle construct has a

longstanding history in marketing research, which describes how people seek to express their identity in many areas such as activities, interests, and opinions. According to Gil et al. (2000) cited in Mei-Fang (2009), a healthy lifestyle construct is operationalized as the level of physical activities an individual undertakes, natural food consumption, health care, and life equilibrium. The basic reasoning behind this is that consumers may be health conscious and ready to do something good for their health, or may have favorable environmental attitudes formed by society, and therefore, engage in environmentally friendly behavior thus leading to a healthy lifestyle (Mei-Fang 2009). Bloch (1984) cited in Divine et al. (2005), defined a healthy lifestyle as “an orientation toward the prevention of health problems and the maximization of personal wellbeing.”

Also Krystallis & Chryssohoidis (2005) cited in Mei-Fang (2009), identified that some people may be health consciousness and concerned about their own health but they are too busy to exercise and/or to do health checks. Some are not willing to consume natural foods due to the higher price of these foods. In other words, although health consciousness and a healthy lifestyle are correlated, some people still follow an unhealthy lifestyle even if they are health conscious because of other factors.

However, regardless of which type of consumer is most responsible for driving demand for healthier products, it is clear that this demand has had a large impact on a number of industries. Changing consumer attitudes towards health and lifestyle, consumption patterns, demand for choice, convenience, quality and value for money increasingly impact on the food industry and highlight the pivotal role of the consumer within it

(Armstrong, Durkin & Hollywood, 2007). O'Leary (2005) cited in Divine et al. (2005), identified that in the food industry, health oriented products accounted for five of the seven food categories that experienced a rapid growth in revenue between 2003 and 2004. Having a proper understanding of this trend towards a healthy lifestyle will help to address increasingly important issues associated with the changing population demographics in Australia. Food change can be enrichment. It can mean increased security, pleasurable discovery, a broadening of horizons (Visser 1999). Combining an understanding of how people perceive and interact with healthy food choices will give the food industry increased opportunities to provide food of optimum eating quality and nutritionists a wider choice of dietary components (Fillion & Kilcast 2001).

2.2.2 Perceptions of healthy eating

Healthy eating can be perceived differently by different individuals. The following is extracted from a review by Claude & Paquette, (2005) on "perceptions of healthy eating" defined as the public's and health professionals' meanings, understandings, views, attitudes and beliefs about healthy eating and healthy foods. Databases, the worldwide web and selected journals were searched for Canadian and international scientific literature from 1980 to 2004. Therefore, according to Claude & Paquette (2005), fundamental elements of healthy eating were found to be;

1. Vegetables and fruits - This category is mostly associated with "the should syndrome", where people are obliged to eat vegetables and fruits. Social influences were associated with salad consumption but not with the consumption of boiled vegetables. Brug et al. (1995) cited in Astill, Nijmeijer & Worsley

(2004), identified that cooking is required for the preparation of boiled vegetables which is more time consuming than salad preparation. Cooking needs more effort and can be a barrier to vegetable consumption. Additionally, raw food has a higher nutritional value under certain circumstances;

2. Meat – In most cases the perception of healthy eating included avoiding or limiting meat consumption. Specifically red meat, and replacing it with chicken or fish. On the other hand, some people especially those from a lower socio-economic backgrounds, consider eating meat as part of healthy eating. Another survey consisting of 7000 households to find information on socio-economic nature and food consumption by Mark & Alan (1993), also states that the professionals or people of a higher socio-economic background have significant preferences for many of the categories of food identified by nutritionists currently as healthy, while manual working class households or lower socio-economic households consume proportionately high amounts of cooked meats. This could be due to the fact of meat-masculinity association which derives from the stereotypical depiction of strength as a masculine characteristic. Research findings also show that women perceive light, soft textured foods and foods that are easy to digest to be healthier option, whereas meat and foods that are harder to digest are associated with men. Another research by Heinz & Lee (1998), indicates that the basic assumption of cooking meat is a norm and that meatless dishes are likely to be found "poor" in taste and fulfillment;
3. Low levels of fat, salt and sugar – This is perceived as healthy in all age groups;

4. Grain products and dairy products were not included in people's perception of healthy eating to any major extent; and
5. Children and adolescents included dairy products in their definition of healthy eating more often.

A growing trend in food consumption is the move towards organic foods. Luomala et al. (2006), in a study of eight focus groups consisting of different age groups and residency based on urban or rural, found that perceptions of healthy eating was linked with consumption of organic foods. Organic foods are becoming popular and regular customers tend to be educated, affluent and of higher social class. They buy organic products because they perceive them to contain no pesticide residues and higher natural mineral and nutrient content. They also emphasize socially conscious based motives relating to the environment and animal welfare. The underlying ideology is that alienation from nature results in disharmony that is, if constant, a serious threat to health. Informants also brought up the importance of working in harmony with nature rather than controlling and exploiting it (e.g. gene manipulation).

Torjusen et al. (2001) cited in Deliza, Iop & Teixeira (2006) and Wandel et al. (2001), verifies that consumers were concerned about ethical, environmental, social and health factors which were important variables for food choice. Organic vegetables are one of the earliest recognized and mostly widely available organic products. Women are more likely to buy organic foods than men. Men are more skeptical about organic foods and consider them to be just a label which charges extra money. Price and availability is considered as a barrier for organic foods (Lea & Worsley 2005). Although research by Cornwell, Juric

& Squires (2001) suggests that consumers from different cultures may have different attitudes that are related to consuming organic food, this has not been the focus of the study and therefore needs further research.

However studies indicate that knowledge about healthy eating does not necessarily translate into practice. Despite the fact that the basic principles of healthy eating advice have been remarkably constant over recent years, people are quick to use any research findings as the justification for not changing their diet (Keane & Willetts 1994).

More research carried out by Ajzen (1991) & Herne (1995) cited in Alexandra, Lumbers & Wilson (2004), indicates that the potential of “nutrition knowledge” and attitudes and beliefs to influence food selection has been demonstrated in both psychological and food choice research. Further, it has been suggested that whilst individuals may be capable of informed choices they often lack the opportunity to act on them due to economic or cultural constraints. To better understand how people from different socio economic demographics and cultures give different meanings to their choice of food the following model can be used.

2.2.3 The consumption meaning model

The basic premise of this model is that health meanings are formed as a result of interaction between the consumer and his/her social and cultural environment. At both ends of interaction, there are several factors that determine or at least partially shape the meanings and consumption practices individuals associate with health (Luomala et al., 2006). This can be better explained with the use of the following chart developed in the study by Luomala et al. (2006).

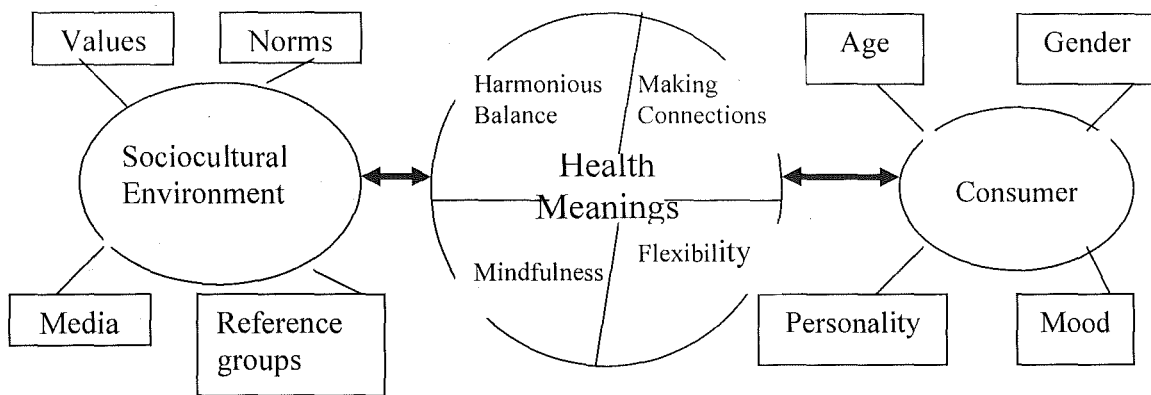


Figure 1: A tentative framework model for analyzing health consumption meanings (Luomala et al., 2006).

According to the model depicted above, fine grained differences in health meanings exist across consumers with varying backgrounds. Usually studies related to health issues only focus on people's consumption of food. However, a proper understanding of what consumers define as healthy is an essential criterion. Therefore this model helps to analyze the dynamics of health consumption meanings. Hence, an understanding of different health meanings assists designing more persuasive health-marketing

communication for consumers differing demographically or psychographically. Grunert & Valli (2001) cited in Luomala et al. (2006), observe that in consumer-led product development it is important to create meaningful product concepts to be forwarded to consumer testing. In other words, a thorough understanding of consumers' health meanings is a critical precondition of successful health product development.

However this model does not include the effect of certain factors such as income and education. Even though consumers form different meanings for health through society and culture, one's level of income and education will also shape their meaning of health. Therefore the literature review on people's perception of healthy eating should not only discuss socio-cultural factors but also include income and education as factors influencing consumer's meaning of healthy food choices.

2.3 Demographic factors affecting healthy food choices

There are several demographic factors such as age, gender, level of education and income that can affect people's choice of food consumption. As mentioned in the consumption meaning model, these demographic factors can influence consumption by shaping perceptions and having an impact on choice of healthy foods.

2.3.1 Level of impact on food choice by age

Research conducted by Goyan et al. (2004), to assist health-care professionals in the development of strategies to formulate self-management education for improved quality of life and diabetes control, found that the influence of age on taste is most significant in

very young children, who consume food at an almost completely sensory level, often devoid of cultural and social inhibitions. Taste is also a significant factor in the food choices of adolescents. Teens are attracted to the sweet, salty, and fatty flavors found in inexpensive, processed foods and have a strong desire to eat whatever their peers are eating as a form of self-expression through differentiation from their parents and the need to conform with their group. Young adults continue to be concerned with taste, although cost and convenience issues become a factor in food selection, especially for families. In middle age, income typically increases and cost concerns diminish to some extent. Some adults enjoy their ability to purchase expensive tasty foods and beverages at this stage, with variety at a premium. For others, specific physical or spiritual concerns or a general interest in longevity may begin to influence food choices. In old age, taste often becomes secondary to a diet that satisfies health needs. Limited income or physical disability may once again make cost or convenience important, as well.

According to Australian Bureau of Statistics, age is related to fruit or vegetable intake. Older adults are more likely to consume an adequate amount of fruit or vegetables compared to young adults. That is, 85% of adults aged 55-64 years were likely to consume inadequate fruit or vegetables compared to 95% of adults aged 18-24. (www.abs.gov.au).

Dawson et al. (2004), in a study focused on food consumption based on convenience or health, identified that consumption of a greater variety of health-oriented food products is positively correlated with the age of the subject. This could be owing to a less health

conscious attitude of people in teens and twenties compared to older people or belief by these people that their body can recover more quickly and therefore they do not need to consume health-oriented food products. It may also be due to the fact that young adults are targeted in the marketing of the latest packaged and processed products and therefore are more likely to consume convenience based fast foods.

A study conducted by Brown, McIlveen & Strugnell (2000), with a sample size of 1700 respondents which included young consumers (n = 900) and their respective parents (n = 800), sought to analyze young consumers' food preferences within the home, school and social environments. They found that as young consumers move into adolescence (11-16 years old), they may have more freedom to select foods, in accordance with their own individual preferences. Young consumers' food preferences within the home environment were however found to be based on healthy foods compared to those expressed in school and social environments, which are less healthy. The home environment was presented as one of the most prominent influences upon young consumers' healthy food behavior, particularly during pre-school years. The one or two portions of vegetables consumed during school or social environments appeared to be minimal, when compared to the recommended daily intake guidelines of five portions daily.

In other research by Croll, Story & Sztainer (2001), it was found that youth engage in unhealthy dieting practices and have erratic eating patterns that include high intakes of fast foods and other foods high in fat and sugar, as well as low intakes of fruits, vegetables, and calcium-rich foods. Young consumers' apparent lack of vegetable consumption further signifies the immense gap between nutritional awareness and knowledge put to practice. This can also be linked with cultural influences which will be

discussed later. This study was conducted with a sample population of 25 focus groups consisting of 138 adolescent girls and 65 adolescent boys in grades 7 to 12 from three senior high schools and one junior high school.

Luomala et al. (2006) found that young people seem to be less concerned about the health effects of food. It is generally believed that as people get older, medical problems become more frequent and this heightens their health-orientation in life. On the other hand according to Alexandra et al. (2004), in terms of the types of foods consumed by this population of older people, the pattern of consumption included that of white bread, potatoes and sugar in tea. Webb & Copeman (1996), cited in Alexandra et al. (2004), note the consumption of these foods may be related to older people's perceptions. These perceptions may make them less likely to consume a wide variety of foods from one group, due to a preference for more traditional foods and because of later exposure in life to certain food types.

2.3.2 Level of impact on food choice by gender

According to the Australian Bureau of Statistics, survey results for 2007-08 shows that females aged 15 years and over, consumed more fruit and vegetables overall than their male counterparts. Of persons aged 15 years and over, 56% of females and 46% of males met the recommended daily intake of fruit and 10% of females and 7% of males met the recommended daily intake of vegetables. Females were also more likely to meet the recommended daily intake of both fruit and vegetables (8%), compared to males (5%) (www.abs.gov.au).

On the basis of existing food consumption literature, gender is a potentially important factor affecting the meanings people link to health and health pursuits. For instance, according to Kubberod et al. (2002), cited in Luomala et al. (2006), males displayed high-hedonic scores for the reddest meat varieties while females showed significantly higher hedonic scores for the white meat varieties. Of white and red meat, the former is largely perceived as a healthier food choice. Also Fagerli & Wandel (1999), cited in Luomala et al. (2006), identified that there were differences in what men and women consider being important in a healthy diet and in actual food choices. For example, women consumed substantially more fresh vegetables and fruits than men. Research conducted by Thomas & Sheikh (1994) provided contradicting results with regard to preferences for consuming fast foods and gender. According to this research, female adolescents consumed more fast foods such as fish and chips, pizza and hamburgers than males. The reason was mainly because these fast food outlets were widely used as meeting points as part of their social routine. However this research was conducted with a sample population of Asian and Caucasian adolescents. Therefore these research findings could have an impact of cultural differences which was not evident in the previous research conducted by Luomala et al.

Beardsworth et al. (2002), in a study focusing on influence of gender on dietary choices and attitudes, found that when respondents were asked to assess the statement “a healthy diet should always include meat”, the overall majority “disagreed” or “strongly disagreed” (65.8%). However, men were significantly more likely to agree and less likely to disagree than women. This study also reported that it was women who bore the main responsibility for deciding what foods are purchased. Figures indicated that 76.6% of women indicated they decided, as opposed to 15.3 % of men.

Ball et al. (1995), in a study of Australian men (n=2501) and women (n=2739) ages 18 years and over that focused on the relationship between education and the intake of a variety of individual foods, as well as groups of foods provided similar findings. Their results indicated that women tend to take more responsibility for food selection and preparation than men. They concluded that based on this, women are likely to be more knowledgeable about nutrition, and more likely to acquire health related knowledge than men. However these research findings may be outdated because at present, a majority of women are in the workforce and due to this, domestic chores are shared in many households.

2.3.3 Level of impact on food choice by level of education

The interaction between education and health has been well recognized. The effect of education on a person's health may include its influence on their employment prospects and income which can affect the options available to improve their health, as well as their ability to gather relevant information so that they can understand options and choose healthy food choices that will benefit them the most (www.abs.gov.au).

Research by Ball et al. (1995) states that there are a number of reasons why education might influence food choice, such as;

- 1) Education may open the way to differential access to food and health information.
- 2) Highly educated people generally take up innovations sooner than less-educated people. For example, in the UK, foods and diets low in saturated fat were adopted by the tertiary-educated before others.
- 3) Social epidemiologists suggest that education enables people to rise up the social class hierarchy, allowing them greater power over outcomes in their lives. This third factor can be linked with psychological influences which impact choice of food.

This research also shows that members of tertiary educated groups tend to know more about food and nutrition. They also appear to have healthier dietary habits. In contrast, lower education has been found to be associated with various indices of poor diet, including diets higher in fat density and the purchase of a restricted variety of fruit and vegetables. However, Visser (1999) provided contradictory findings which were based on culture. He found that when people accept new foods, they do so most readily when their culture already has a place for them and not necessarily based on education or food related knowledge.

According to research conducted by Luomala et al. (2006), it appears that women have a higher health consciousness, follow healthy diet recommendations to a greater degree and have learned more about health than men. People's ability to interpret health claims on food products can be regarded as a measure of their knowledge on nutrition. According to

a study by Williams (2005), the reasons for liking health claims seem to be related to general difficulties in interpreting existing nutrition information on labels. In a French study, three-quarters of consumers said they only sometimes or never used the nutrition information on food products mostly because they believe it to be too complicated. In the United Kingdom (2003), 29% of consumers believed that there was too little information on the label to help them find healthy foods. Therefore, lack of nutrition knowledge can limit consumers' abilities to understand or evaluate a health claim, and this lack of understanding can diminish the credibility of claims.

However research according to Brown et al. (2000), indicates that there remains a significant "gap" between consumers' nutritional knowledge and their ability to implement such knowledge into the reality of their daily food behavior. A study by Beardsworth et al. (1995), focusing on stability and change in contemporary foodways, nutritional beliefs and practices with a sample size of 420 adults between the ages of 18 and 65, verifies that a large proportion of the sample demonstrated that they could apply this knowledge accurately in multiple choice test questions where they were asked to choose healthy option meals. Although having accurate nutritional knowledge and being able to apply it correctly did not necessarily mean that the same proportions of the sample practiced what they knew. Croll et al. (2001), note that while the understanding of healthy eating guidelines and recommendations may be fairly strong, there must be other factors encouraging people to engage in healthy eating rather than a general lack of knowledge. These constraints may include peer norms and social pressure as barriers to healthy eating.

2.3.4 Level of impact on food choice by level of income

Income also is said to have a direct impact on having access to a healthy diet and indirectly affects the relationship between food and health. A decrease in income is also associated with a decrease in foods eaten out of home, pre prepared meals and increased home cooking. This could result in a reduction of fat intake and lead to a healthy diet but on the other hand, lower food variety is associated with diets of decreased nutritional quality. However, alteration in food choices will not solely be dependent on the income but also on positive psychological and social factors which could arise when people move from unemployment to employment (Anderson, & Morris 2000).

According to research conducted by the Australian Bureau of Statistics (2006), people with higher incomes were more likely to have higher health literacy skills, with 63% of the high income group having adequate or better skills compared with 43% of those in the middle income group and 26% of those with low income group (www.abs.gov.au). However it must be recognized that income will not always be an accurate predictor for healthy eating. That is, even if one is financially better off does not mean that it will lead to a healthy lifestyle. This financial situation may be a result of longer working hours which lead to time restrictions which in turn lead to a switch to convenience based foods which often provide less nutritional value.

A number of studies conducted with regard to demographic factors depict similarities. Research conducted by Divine & Lepisto (2005) in the US focused on the impact on a healthy lifestyle of antecedents such as, demographics, values and psychological

characteristics. The population sample consisted of 582 respondents and data for this study were collected using a nationwide mail survey of licensed drivers ranging in age from the early 20s to over 80. The research found evidence to support the following three findings:

- 1) gender is a significant predictor, with the coefficient indicating that females are more likely than males to maintain a healthy lifestyle;
- 2) education is also a significant predictor; with the positive coefficient indicating that the more educated one was the more likely one belonged to the healthy lifestyle segment; and
- 3) finally, age was also a significant demographic predictor. This positive coefficient was interpreted as indicating older people are more likely to maintain a healthy lifestyle (Divine & Lepisto 2005).

2.4 Psychographic factors affecting food choices

As well as demographic factors, research by Divine & Lepisto (2005) has found links between psychographic factors and food choice. These influences can be divided into four categories such as, locus of control, temporal orientation, role overload and stress related factors. However, according to the study only two of the four antecedents provided empirical evidence, claiming a significant relationship with the dependent variables. The results indicated that maintaining a healthy lifestyle is affected by both time-related variables; temporal orientation and role overload. This has been supported by Berry (2004) and Mothersbaugh et al. (1993) who found that perceived time pressures have an adverse effect on eating habits and diet quality. In this study, individual differences in time-related personality traits were modeled using two variables. The first

was temporal orientation, a trait that indicates whether a person tends to plan ahead or live their life day to day. This trait was first researched by Hendrix (1984), who found that roughly one-half of his respondents fell into each category.

Interpretations of the coefficients indicate that people who tend to plan ahead and people who experience less role overload/time pressure are more likely to maintain a healthy lifestyle. A study by House et al. (2006), which consisted of four focus groups, each with three to five participants, was conducted on the topic of what defines healthy eating. Two groups contained dietetics students and two groups contained students of other subjects. Research found that lack of time was described as a principal barrier to healthy eating by both groups which validates the temporal orientation. However the response by the dietetics students contradicts with the positive influence of education and healthy food choices found in research by Ball et al. (1995). Even though the dietetics students have sufficient knowledge, time remains a barrier for the consumption of healthy foods.

Other research, by Brug *et al.* (1995) cited in Astill et al. (2004), found that low fruit and vegetable consumers had lower self-efficacy expectations (the extent to which one believes they are in control) and less positive attitudes than higher consuming respondents. The external and internal values are another factor which impact on consumer behavior. Goldsmith et al. (2005), in research conducted with a sample population of 323 adult women shoppers attempted to analyze social values and attitudes towards snack foods, convenience foods, and cooking. They found that external values were associated with a higher need for group identification, affiliation and conformity, while internal values were associated with a lower need for group identification,

affiliation and a lower tendency toward conformity. These findings are important because they show that where consumers interact with product categories that visibly represent to others something about themselves, values may guide product purchase and use. Also according to Homer and Kahle's study cited in Goldsmith et al. (2005), social values were systematically associated with use of natural foods.

More specifically, they found that more internally-oriented and less externally-oriented consumers liked natural foods than did other people, and that these positive attitudes were also associated with appropriate food-purchase and use behaviors. According to Villani & Wind (1975) cited in Divine & Lepisto (2005), locus of control is defined as the extent to which one believes they are in control of their life (internal orientation) as opposed to believing their life is being controlled by outside forces (external orientation). Further research by Beardsworth et al. (2002), indicates that 63.4% "disagreed" or "strongly disagreed" with the idea that health is influenced mainly by factors over which the individual has no control, with no significant male/female difference. This also could be related to the level of education as research findings by Davies and Ippolito cited in Ball et al. (1995), have shown that tertiary education indices represent future-oriented belief systems that value self-control and prevention and downplay external fatalistic explanations of personal events.

According to Forsythe, Gu, Kim & Moon (2002), in a study focusing on the relationship of consumer values, needs and purchase behavior in two Asian consumer markets , consumers may choose particular products/brands not only because these products

provide the benefits expected, but also because products can be used to express consumers' personality, social status or affiliation (symbolic purposes) or to fulfill their internal psychological needs, such as the need for change or newness (emotional purposes). This may also verify the concept of needs; social status or affiliation as social needs and change or newness as experiential needs which can be better explained with the use of the conceptual model.

2.4.1 The conceptual model

The conceptual model used in the study by Forsythe et al. (2002) explains that people's values such as self directed values and social affiliation values lead to different types of needs such as functional, social and experiential needs which then lead to certain purchase behaviors.

Functional needs are considered fairly low-level motivators encouraging consumers to focus on basic advantages of the product. Social needs are identified as social approval, affiliation, personal expression and outward directed self-esteem. Consumers are driven by a wide range of ideas and emotions. Many want the feeling of security that a favored product can give or the sense of self-definition that comes from choosing and using products that reflect one's personality, and crave both a feeling of connection to others and a sense of individual superiority. These and other desires are reflected in the types of foods chosen by different individuals (Dutra, Frary, & Wise, 2004). Finally, experiential needs reflect consumers' needs for novelty, variety, and sensory gratification/pleasure

and have been recognized as an important aspect in consumption. This model can be depicted as follows.

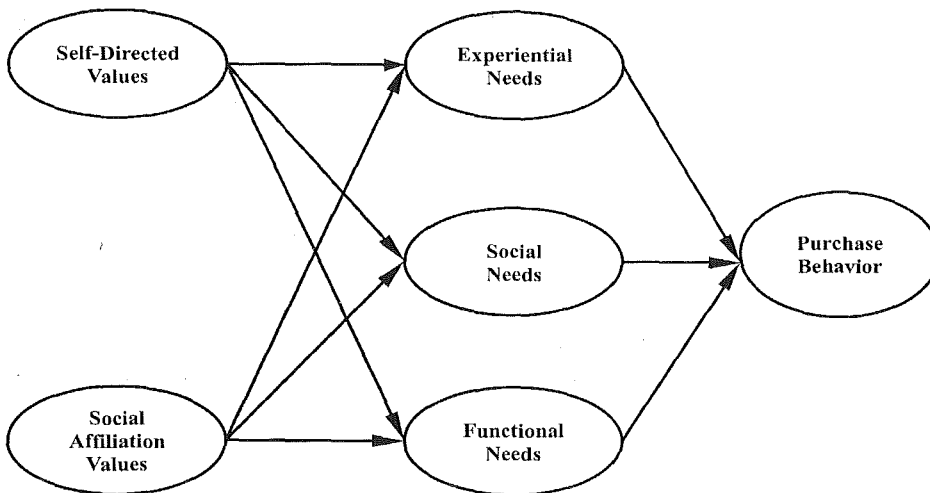


Figure 2: Conceptual model for the relationship between social values, types of needs and purchase behavior (Forsythe et al., 2002).

It is important for marketers to understand the balance in the consumer's mind between different motivations and expectations when making purchase decisions. It is also important to recognize that different cultures will have different priorities influencing individual purchasing decisions and can be linked with the three categories of cultural values as mentioned in a the study by Daghfous, John & Frank (1999). That is, it can be suggested that consumers with conservative cultural values will have functional needs, consumers with dynamic values will have social needs and consumers with hedonistic cultural values will have experiential needs. This will be further explained by examining the impact of culture as a motivational factor for consumption of healthy foods.

2.5 Impact of culture on choice of food

As a representation of the core values that are shared in a community, culture is a powerful motivational factor influencing meanings consumers associate with food and eating, and consequently, with health (Luomala et al., 2006). A study by Daghfous et al. (1999), focusing on cultural values as an individual's inclination to adopt a new product is influenced by his system of values, shows that consumer's values can be three ways such as, conservatives, dynamics and hedonists.

Conservatives, place great importance on values such as self-respect and respect from others. These individuals have the lowest scores of adoption and are generally consumers with the weakest propensity to adopt new products. A study by Forsythe et al. (2002) found that Asian consumers are highly concerned about social affiliation, relationship with others for social acceptance, and the self-directed values such as self-respect or being well respected by others. Therefore it shows that their cultural values are more conservative than those of the Western consumers.

Dynamics place a strong willingness to establish warm relationships with other members of society and maintain security. These individuals have average adoption scores and as consumers are more likely to adopt new products than the previous groups.

Finally the hedonists consider fun and pleasure, searching for strong sensations, and establishing warm relationships with others as very important. They do not place much importance on empathy. Individuals in this group have the highest scores of adoption and

the highest propensity to adopt new products. Mills (2000) cited in Josiam, & Monteiro (2004), notes that Indian and Korean cuisines are seen as appealing to adventurous diners in Western cultures with hedonistic values as these dishes are different from their day to day meals. However in an intra-cultural context, Iqbal (1996) cited in Josiam, & Monteiro (2004), found that increased interest in ethnic foods may be a reflection of the changing cultures of consumers resulting from individuals from different cultural backgrounds being in continuous contact. These differences in personal values based on one's culture can have a significant impact on how consumers make food choices.

In cultures where the dietary domain includes plentiful food, such as in the United States, taste is typically the most significant factor in selection of food. Cost and convenience may be important to some people, or on certain occasions. According to Raine (2005), food and eating also have social, cultural and symbolic functions; food and feeding can signify a sense of belonging, caring and community. Food is sometimes chosen for self-expression (adolescents may eat fast food; orthodox Jews may eat a Kosher diet; and southerners may eat fried chicken, grits, and greens) or to promote well-being. Vegetarians may eat only fruits, vegetables, and grains for moral well-being; Hindus may avoid beef for spiritual well-being; athletes may load carbohydrates or eat meat for physical well-being. Variety can influence people who travel or eat often at restaurants. But in general, taste dominates choices within the dietary domain (Goyan, Kathryn, Kittler, & Sucher 2004).

However, little research has been conducted on how consumer values in different cultures influence the shaping of consumer needs and how these consumer needs affect subsequent purchase behaviors. Thus, it is important for global marketers to identify prevalent types of consumer needs in multi-cultural consumer markets and to understand how these needs affect purchase behaviors. Identifying different types of needs in consumer markets can assist in developing effective marketing strategies appealing to the specific needs of those markets (Forsythe et al., 2002).

2.6 Impact of personal value on food choice

Research conducted by Divine & Lepisto (2005), also mentions personal values as a motivational factor which has a significant impact on one's choice of food. Motivations relating to food choice can be described using nine variants of personal value. That is, fun and enjoyment, excitement, sense of belonging, well-being, warm relationships, self-respect, self-fulfillment, sense of accomplishment and security. Values can be defined as a consumer's desired end state of existence, such as happiness, security, or pleasure (Crawford & Manyiwa, 2001).

However, only one of the nine personal values was found to have a significant relationship with maintaining a healthy lifestyle. That is, only excitement was found to have a significant and negative coefficient, indicating the less importance one places on the value excitement, the more likely it is that one will maintain a healthy lifestyle.

In further research conducted by Beardsworth et al., the personal value of fun and enjoyment is also relevant to a healthy lifestyle in that food is very much a source of enjoyment and gratification, with 73.4 per cent “agreeing” or “strongly agreeing” with the statement “I get a lot of pleasure out of eating” (2002). Also research findings by Luomala et al. (2006), shows that there are four categories of health meanings based on the consumption meaning model which is also similar to the research mentioned above. They are, harmonious balance, making connections, mindfulness and flexibility.

The first category, harmonious balance is about the close interaction between the body and mind linking with food and regularity of eating with general well-being. The second category is about making connections between one’s own personal health and the amount and quality of social interaction with others. Thirdly, mindfulness refers to a vigilant state of self awareness whereby individuals become highly attuned to and appreciative of the what, why, and how of their health. Individuals would often show suspicion about the information provided by the health authorities. Thus would filter, evaluate the incoming information from health experts and form their own ‘manuals’ for healthy living. Finally, flexibility refers to a reasonable compromise between their natural health ideals and the practical demands of living in a fast-paced, convenience-oriented consumer culture. Therefore these findings imply that the meaning of health is composed of several personal value categories and that food consumption in its’ different forms facilitate behaviors people perceive as healthful. Furthermore, the relationship of values, attributes and consumer behaviour can be explained with the use of the means-end theory.

Gutman (1982) cited in Crawford & Manyiwa (2001), mentions that the means-end model is essentially based on two assumptions. Firstly, values play a dominant role in guiding behaviour, and secondly, people cope with the tremendous diversity of products that are consistent with their values by grouping them into sets or classes so as to simplify the process of making choices. According to Naspetti & Zanolini, the means-end approach suggests that consumers think about product characteristics or attributes in terms of personal consequences. These may be perceived as positive (benefits) or negative (risks). In other words, the means-end chain model refers to the link between consumers' needs and product characteristics, and investigates the goals/motivations in purchasing a product. In means-end chain theory consumer decision making is treated as a problem-solving process (2002).

Grunert (1995), cited in Lahteenmaki & Urala (2003), states means-end chains are usually presented as a model of the consumer's cognitive structures, namely as a hierarchical value map. From these hierarchical value maps, it is possible to clarify how product characteristics are linked with consequences and how these consequences are then linked with life values.

Nunes and Cespedes (2003) and Solomon (2004) cited in Armstrong et al. (2007), identify how the way a consumer behaves throughout the purchasing process can assist a company to determine what a consumer actually needs and translate this into a product offering. Therefore, within a product purchase, investigating consumer motivations can highlight the process by which underlying purchase needs can be satisfied.

Also Louden and Della Bitta (1988) cited in Armstrong et al. (2007), have discovered that directing behavior motivations can achieve the following aims:

- a) guide consumers across purchase decisions;
- b) persuade a consumer to purchase a certain product/service as a means to satisfy their need;
- c) assist consumers in developing a criteria for evaluating products and;
- d) affect consumers' determinants of perception, attitude and thought processes.

The laddering interviews provide a useful tool for product development and marketing to study the structures behind consumers' opinions or impressions. This method makes it possible for important information to be used when targeting consumers with the product information, advertisements or final products. This model can be depicted with the use of the following diagram.

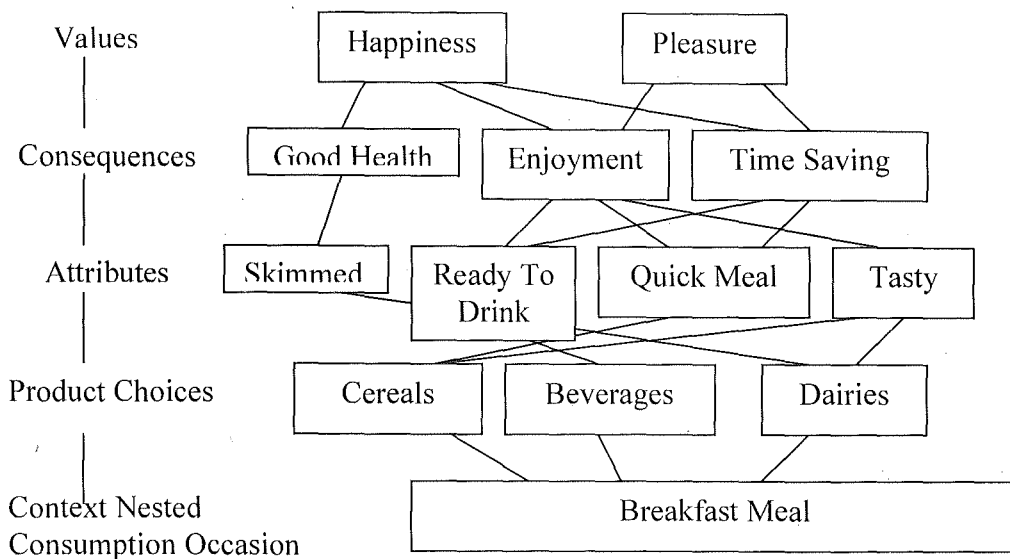


Figure 3: Annotative ladders and conceptual means-end structure for choices that a consumer makes for breakfast at home (Crawford & Manyiwa, 2001).

However, according to Crawford & Manyiwa (2001), this model had some limitations. Firstly, the elicitation of concepts depends on the respondent's ability and or inclination to link their choices to personally relevant desired outcomes and values. Walker & Olson (1991) cited in Crawford & Manyiwa (2001) state that this limitation is not only peculiar to the proposed model, but has been established as a common weakness of cognitive-based research. The second limitation of the model is that the research approach relies on trust and confidence between the respondent and the researcher. The respondent has to agree to be interviewed on a sustained basis about issues that could be too personal for free discussion with a stranger. There is therefore a need to develop relationships between the researcher and the respondent before the interviews.

The means-end theory is also similar to the conceptual model as it explains how values lead to certain behaviors and offers a realistic framework for extending means-end theory

to explain linkages between choices that consumers make in social contexts and the consumers' values (Crawford & Manyiwa 2001).

2.7 Research gaps

The literature reviewed contains certain limitations with respect to both the models and methodology. These gaps will help develop the theoretical framework for future research.

2.7.1 Perceptions of healthy eating

Research indicates that the perception of healthy eating is generally based on food choice. Fruits and vegetables are generally recognized as part of healthy eating together with certain characteristics of food such as naturalness and a balanced dietary intake (Claude & Paquette 2005). However, this research has implications on matters such as whether there is a link between people's perceptions and their behavior. As noted earlier, knowledge about healthy eating does not necessarily translate into practice (Keane and Willets 1994).

2.7.2 Culture and its' impact on food choices

Values have been widely viewed as the outcomes of culture and ethnicity of a society and have underlying multi-dimensions. Thus, certain types of values may differ based on intra-cultural differences. Also, certain values affect consumers' attitudes and purchase decisions more significantly (Forsythe et al., 2002). A research gap identified is to investigate if there is a relationship between cultural values and consumer needs which will contribute to shaping the consumers' buying behavior. The importance of

understanding consumer behavior in a particular cultural setting (understanding social values) such as the Chinese culture, was addressed in the *British Food Journal*. According to Swanson (1996), various sociolinguistic subcultures within the Chinese community have their distinctive cuisines and there is a symbolic meaning to the foods they consume.

However, little research has examined how consumer values in inter-cultural context rather than inter-cultural context shaping consumer needs, to be met via particular products/brands and how these consumer needs affect subsequent purchase behaviors. Thus, it is important for global marketers to identify prevalent types of consumer needs in targeted multicultural consumer markets and to understand how these needs affect purchase behaviors.

2.7.3 Motivations affecting the food choice decision making process

Current research indicates that based on demographic characteristics, convenience and health trends are the most prevailing consumption trends when it comes to making food choices. "Convenience" was a central factor in vegetable consumption. This is consistent with previous research by Steptoe et al. (1995) and Worsley (1995) cited in Astill et al. (2005), which also showed that convenience is an important factor in determining food choice. Research also indicates that personal and social values of consumers which are deeply held feelings of what is important in life influence both consumer attitudes and behaviors impact of social values on food related attitudes (Dawson et al., 2004).

However the research does not include aspects of personality profiles and psychographic characteristics of people, which are attributes subject to change affecting one's behaviour

based on moderating variables such as importance, education, accessibility and involvement. According to Deliza et al. (2006), food involvement refers to the level of importance of the food in a consumer's life, and can assume that the level of food involvement may vary between individuals and can be an important factor in making a purchase decision. Kekkonen and Tutorial (1999) cited in Deliza et al (2006), identify that involvement can be related to hedonic values. These research findings will have implications for food marketers who want to promote their products more effectively.

The economic environment, in which food is a commodity to be marketed for profit, has major implications for eating practices in a market-based economy such as Canada. Increasingly, the food industry targets marketing messages at young children, perhaps in recognition of their vulnerability to such messages associated with an underdeveloped critical consumer conscience. As well as children's reduced critical thinking abilities, marketers recognize the strong influence children and youth have on the purchasing patterns of caregivers and the large disposable income of current children and youth. That is, from a very young age, children are bombarded with media messages through television advertisements, the bulk of which promote a diet high in fat and sugar, and lower in fruits and vegetables. Exposure to advertisements influences individual determinants of healthy eating such as food preferences and perceptions of healthy eating that give priority to distorted nutritional messages designed to sell individual products, not promote a total diet (Raine, 2005).

However, none of the studies examined identified the significance of variety and the availability of packaged foods on healthy food choices and tastes in the consumers. That is, packaged or fast foods contain more sugar and more salt, and when fresh food is

consumed in comparison, it may be bland and tasteless to the consumer. Hodgson et al. (1994) cited in Alexandra et al. (2004), maintain that greater food variety can contribute to greater nutritional adequacy and the advantages to eating a variety of foods are numerous. Therefore, research can be conducted to investigate if availability of more healthy choices of food (more variety) has an impact on people's decision making of maintaining a healthy lifestyle and if the existence of a variety of healthy foods will make healthy food more accessible, and acceptable, to a larger part of society.

2.8 Summary of the literature review

The consumer is central to all activities associated with marketing theory and practice. It is therefore critical for any food marketer to understand how a consumer behaves to ensure the successful delivery of their product to the marketplace and to retain business. Gray et al. (2003) cited in Armstrong et al. (2007), note that in common with all sectors, the food industry is constantly changing and competition is intensifying, thus highlighting the need to create more market-oriented and innovative food product development activity.

This study examined the existing research carried out with regard to people's interactions with healthy food choices and their perceptions. Several models and theories were used to discuss the relationship of people's perceptions and how they relate to food choices. The importance, practicality and limitations of the models and theories were also discussed.

Finally research gaps were investigated which creates the framework for future research.

The areas identified for further research were;

- a) to have a better understanding of perceptions of healthy eating and its relationship with learning theories;
- b) how a person's learning will have an impact on the choice of food
- c) whether availability of more choice of food (more variety) as a motivational factor has an impact on people's decision making of maintaining a healthy lifestyle; and
- d) how consumer values in inter-cultural context shape consumer needs, and how these consumer needs affect subsequent purchase behaviors.

Further investigation into the interaction between marketing strategies and the perception of food, in particular healthy food would be useful in the present climate of health consciousness and the related obesity epidemic.

3. Research framework

Based on the research objectives and research questions, the research framework for the current research will focus on people's perceptions and consumer needs with regard to healthy foods; demographic and psychographic influences on healthy food choices; and the impact of personal value and culture on healthy food perceptions. This can be depicted as follows;

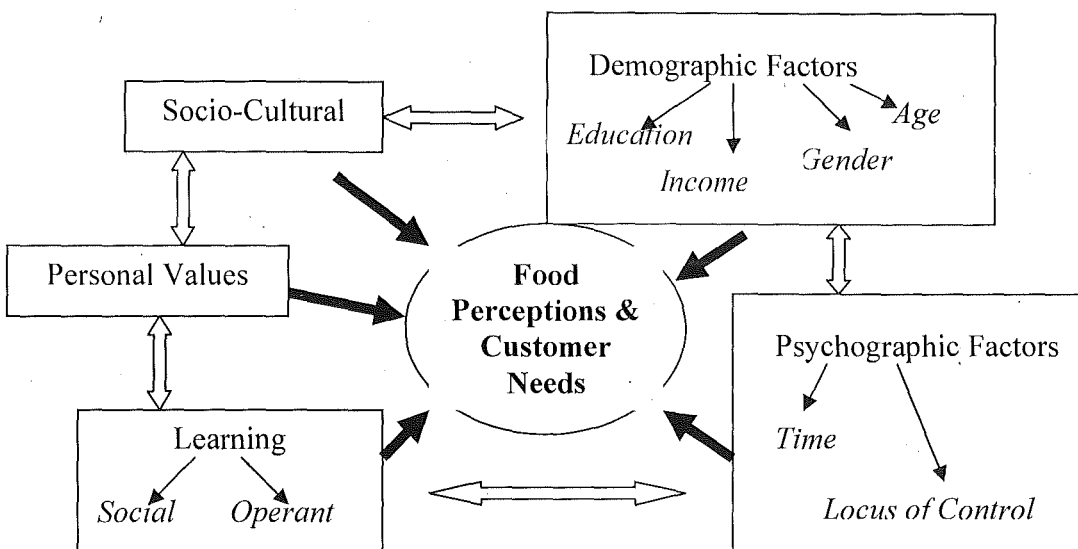


Figure 4: Research framework model (Luomala et al., 2006, Divine & Lepisto, 2005 and Forsythe et al., 2002).

Demographic, psychographic, personal values, socio-culture and learning have been considered as factors influencing people's perception on healthy foods. This model is a modification of the consumer perceptions model by Luomala et al. (2006) as discussed in the literature review with additional factors such as;

- a) income and education for demographic factors;

- b) temporal orientation and locus of control for psychographic influences (Divine & Lepisto, 2005);
- c) socio-culture classified as, conservatives, dynamics and hedonists, (Conceptual model for the relationship between social values, types of needs and purchase behavior by Forsythe et al., 2002);
- d) customer needs as, functional, social and experiential needs; and
- e) personal values classified as, fun and enjoyment, excitement, sense of belonging, well-being, warm relationships, self-respect, self-fulfillment, sense of accomplishment and security (Divine & Lepisto, 2005);
- f) consumer learning as, social and operant learning.

Perceptions of healthy eating may have numerous meanings and differ in understanding as to what health really means to consumers when selecting food choices. Therefore a clear understanding of perceptions of healthy eating based on learning theories would be essential for marketers to make decisions in advertising and product positioning.

3.1 Learning theories

The research by Claude & Paquette did not emphasize any association between learning theories such as operant and social learning and people's perceptions of healthy eating, (2005). Therefore, further research should be conducted to investigate whether learning theories such as operant learning and social learning will have an impact on people's food choices.

a) Operant learning theory

Operant conditioning can be defined as a process in which the frequency of occurrence of behaviour is modified by the consequences (positive or negative) of that behaviour (Minor & Mowen, 1998, p.139). People often turn to a healthy diet because of their health conditions, spiritual concerns or a general interest in longevity and will often influence their choice of food (Goyan et al., 2004). This theory can be useful to better understand the means-end theory in terms of consequences shaping one's values or behaviors. According to House et al. (2005), although there are many long-term benefits of a healthy eating plan, lack of short-term effects (i.e., quick weight loss) creates another barrier for the public to eat healthy.

b) Social learning theory

Social learning refers to the phenomenon whereby people develop patterns of behaviour by observing the actions of others (Minor & Mowen, 1998, p.147). For example, it is said that dietary guidance of having a daily intake of two fruits and five vegetables are associated with "the should syndrome" (Marie & Paquette, 2005). That is, the society has heard this notion from various sources over and over, so much so that it is generally accepted to be part of leading a healthy lifestyle.

Layder (1993) cited in Crawford & Manyiwa (2001), identifies that a social context can be defined as a social system (e.g. workplace, play group, class, college, or family) in which a person is located and participates in social processes to achieve personal and group goals. Social learning can influence the behaviour of people who are part of the group as well as the behaviour of people who are outsiders to the group.

According to the research conducted on people's perceptions of organic products, the most compelling reason for consumption of organic produce were ethically-based motives relating to the environment and animal welfare. Also people believe that organic foods do not contain any pesticide residues and are therefore better for their health (Lea & Worsley, 2005). These perceptions can be built based on what people learn from their own societal values. Research also indicates that teens are attracted to the sweet, salty, and fatty flavors found in inexpensive, processed foods and have a strong desire to eat whatever their peers are eating as a form of self-expression (Goyan et al., 2004).

The current research will investigate people's perceptions of healthy foods categorized as; meat (red & white), vegetables & fruits, grains, dairy products, intake of fat, salt & sugar and organic foods. Therefore this research will focus on factors influencing people's perceptions on healthy foods and customer needs as well the relationship among each influential factor.

3.2 Hypothesis development

The hypothesis of this study will examine the influence of an individual's locus of control and cultural values as well as demographic factors with regard to healthy eating. According to previous research (c.f., Luomala et al., 2006, Divine & Lepisto, 2005 and Forsythe et al., 2002), in the research framework model, locus of control is categorized under psychographic factors affecting one's choice of food consumption.

According to Zindler-Wernet & Weiss among the many possible influences, one important factor in assumption of responsibility for health appears to be whether individuals believe they can actually affect their health status by using preventive health behaviors (1987). A study conducted by the International Food Information Council found that 95% of the consumers believed that certain foods have benefits that extend beyond basic nutrition and protect against certain diseases or improve people's health status.

However, there are two types of consumers; "the externals" who are aware of the links between diet and health but had not made significant changes to their diet and "the internals" who have actively made dietary changes in order to promote a healthy lifestyle (Frewer, L., Lambert. N., & Scholderer, J., 2003). The results of this study are intended to provide a better understanding of individual cultural values that would have a significant impact on consumers' inclinations to adopt healthy food choices. In multi-ethnic heterogeneous markets, segmenting consumers according to their values should be an important tool in the strategic kit of marketing managers. Also Wallston & Wallston (1981) cited in Zindler-Wernet & Weiss (1987) found that belief in chance is a more critical discriminator between individuals who participate in preventive health behavior and those who do not.

According to Daghfous et al. (1999), cultural values can be three ways such as, conservatives, dynamics and hedonists. Research findings indicate that conservatives are reluctant to make dietary changes that may result in long term prevention of ill health or

even improve their current health status. Many people were found to be reluctant to put in the required effort, particularly if the benefits of products are very distant, uncertain and not being practiced by the majority of the group within which they operate, hence their locus of control has had an impact on their decision-making (Frewer, L., Lambert, N., & Scholderer, J., 2003). Forsythe et al. (2002) verifies that consumers with conservative cultural values are considered to be highly concerned about social affiliation, relationship with others for social acceptance, and the self-directed values such as self-respect or being well respected by others. Therefore, a hypothesis can be formulated as follows,

H₁: With regard to healthy eating, individuals with conservative values will be significantly influenced by their locus of control.

On the other hand the hedonists are individuals who do not place much importance on empathy (Forsythe et al. 2002). They are more likely to engage in healthy eating practices because these individuals believe that their health is within their control and not under the control of “powerful others” (Frewer, L., Lambert, N., & Scholderer, J., 2003). Therefore, another hypothesis can be formulated as,

H₂: With regard to healthy eating, individuals with hedonistic values will be significantly influenced by their locus of control.

Apart from the cultural influences an individual's demographic factors too will have an impact on one's healthy eating and locus of control. Demographic factors such as, gender,

age, income and education will be taken into consideration. According to Frewer et al. (2003) more affluent and better educated individuals, are generally more health conscious and thus may be more motivated to process complex diet and health messages. Also women are more health conscious than men and if one has been brought up eating fruits and vegetables, one is more likely to acquire their taste and continue eating these foods throughout life. The older generation is considered to be resistant to change and to alter long-standing food habits requires permanent changes in food purchase and preparation behaviors. Lambert et al. (2001) cited in Frewer et al. (2003) conclude that assuming people accept that healthy foods have a positive impact on the long term development of positive health, then the pricing of these products will be criticized as these products will be out of range for poorer consumers. Overall, practices relating to health and food choices are said to be linked with people's life experiences, cultural values, and demographic factors. However, these demographic factors will have an impact on ones locus of control and thus influence their healthy eating. Therefore a hypothesis can be formulated as,

H3a: With regard to healthy eating, an individual's age will have a significant influence on their locus of control.

H3b: With regard to healthy eating, an individual's gender will have a significant influence on their locus of control.

H3c: With regard to healthy eating, an individual's income will have a significant influence on their locus of control.

H3d: With regard to healthy eating, an individual's education will have a significant influence on their locus of control.

4. Research methods

4.1 Research design and approach

This research is more descriptive and explanatory rather than exploratory. That is because this area of study has been widely researched and the current study only aims to provide a more detailed picture of the health food sector and extend and enrich relevant existing theories of people's perception and interaction of healthy foods. Also, this study is a cross sectional study as collection of data and analysis will only be carried out once just to meet the research objectives.

Therefore this research used a combination of personal interviews and a questionnaire survey. The data collected were analyzed using quantitative procedures. Quantitative research was used for the current study in order to statistically measure relationships between;

- a) people's perceptions and learning, demographic, psychographic and cultural factors on healthy food consumptions; and
- b) test hypotheses that are linked to general explanatory research and personal interviews were carried out mainly to pre-test the survey questionnaire.

4.2 The sample and sampling process

The unit of analysis for this research has been identified as the Edith Cowan University Joondalup and therefore the sample will be drawn from within the university. The sample population will consist of students and staff of all age groups across faculties. Staff will further consist of two categories as, academic and general.

Edith Cowan University consists of a rather multi-cultural student population. This was another reason for the research sample to be drawn from ECU in order to assess the inter-cultural influence on selection of healthy foods. The size of the sample population was proposed as 150 respondents for the questionnaire and five to eight personal interviews. The sample size was selected to be 150 because that would be an adequate number to be able to further categorize the respondents into sub-groups for data analysis purposes, hence have a better representation of the overall population for each sub-group. Since this research is mainly based on investigating authentic interpretations that are sensitive to people such as, impact of personal values on healthy foods and the cultural influence on consumer food choice; non-probability, convenience sampling was used as methods to select respondents for the personal interviews and the questionnaire survey.

4.3 The development of the research instruments

A list of interview questions were developed in order to test some of the questions in the survey. These questions were developed based on the research questions and the outcome of the literature review. The questions for the personal interviews were adopted from previous research conducted by House et al. (2006) and Croll et al. (2001). These questions will cover areas such as, perceptions of healthy eating; people's learning process and level of nutritional awareness; factors that influence their choice of food and barriers for healthy eating.

Based on the results of the personal interviews, further amendments were made to the final questionnaire. The questionnaire was designed using the funnel sequence where questions were organized from general to specific (Newman. L.W., 2006, p. 294). General questions included healthy lifestyle in general and then moved to more specific questions leading to more personal insights and demographic questions. Questions were developed by adopting and modifying research questions used by previous researchers as follows;

- a) learning – as cited in Beardsworth et al. (2002) to measure the sources of learning and nutritional awareness;
- b) perceptions of healthy foods- as cited in Luomala et al. (2006) to measure the use of different types of foods with the use of likert measure to rate nine statements and some of the statements have been modified by combining research questions used by Astill et al. (2004);
- c) change in dietary patterns – as cited in Beardsworth et al. (2002) and Beardsworth et al. (1995) to measure the variations in food consumption with the use of likert scale, by combining research questions such as, “Inclination towards novelty” and “ethical concerns (environmental and animal welfare)”;
- d) personal values - Kahle (1983) LOV scale as cited in Luomala et al. (2006) to measure importance of the nine personal values and statements such as “I am interested in trying new foods or combinations of ingredients” as cited in Beardsworth et al. (2002) and;
- e) temporal orientation will be measured with the use of likert measure to rate the following statement; “I am the kind of person who plans life ahead rather than

live life day to day” (developed by Hendrix (1984) as cited in Luomala et al. (2006).

Some questions were modified to suit the current research. In addition, new questions were added to assist the current research.

4.4 Data collection

The personal interviews were carried out first in order to verify the survey questions. Appointments were made with the interviewees and 5 to 8 interviews will be conducted within the university premises to make the interviews more convenient to them. After conducting the personal interviews, the survey questionnaires were finalized and was distributed and collected in person.

4.5 Data analysis

The data collected through the survey questionnaires were analyzed using SPSS. Descriptive analyses were conducted to better identify the demographic characteristics in terms of frequencies and percentages. Analytical operations conducted with the use of nominal scale questions assisted in conducting descriptive analyses.

Then, interdependencies among multiple variables were identified with the use of factor analysis and multiple regression analysis. Finally, a series of T-Tests and ANOVA were conducted to examine statistical differences between variables.

4.6 Ethical considerations

Ethics in research is a major issue to be considered and therefore the ethical code of conduct required by the Edith Cowan University was followed to conduct the current research. All respondents of this research was treated with dignity and all data collected was handled responsibly. The individual responses was kept anonymous and the data collected will only be used for the current research purpose.

5.0 Results

This chapter will provide the results of the current study. It will begin with a discussion of the demographic profile of the sample and follow with the respondents' overall perceptions and interactions with healthy food options. Finally, this chapter will discuss the research findings with regard to the research questions to better understand the sample population's perceptions towards healthy eating and also to identify further research areas in this study.

5.1 Description of sample

The sample population of this study consisted of 150 respondents. In some cases the results show that the total of the sample population is less than 150. This is because some questions, such as average income per annum and ethnicity, had not been answered. However those questionnaires were included in the research analysis as the rest of the questionnaire had been completed and the missing data was not deemed to have an impact on the major research questions. The demographic data includes information such as participants' gender, age, average income per annum and education.

The sample population consisted of 42% (n = 63) males and 58% (n = 87) females. While not equal, the sample population is representative of the actual student population of ECU because the university statistics indicate that the student enrolments for the year 2009 were 39.5% males and 60.5% females. The largest proportion of the sample were aged 18-24 (n = 81, 54%) followed by the 25-39 (n = 43, 28.7%) age group. The largest proportion of average income per annum was less than \$25000 (n = 78, 52%) and \$25000

- \$50000 (n = 35, 23.3%). This income is proportionate with the age range. Finally, the level of education indicated that the majority of the sample population had obtained a bachelor degree (n = 45, 30%) closely followed by secondary level education (n = 44, 29.3%). The above figures can be seen below.

Table 1: Age and gender of the sample population.

	Gender		Age			
	Male	Female	18 – 24	25 - 39	40 - 55	56 – 69
Frequency (n = 150)	63	87	81	43	21	5
Percentage	42%	58%	54%	28.70%	14%	3.30%

Table 2: Average income of the sample population.

	Average income per annum			
	<25K	25 -50K	50 - 75K	>75K
Frequency (n = 145)	78	35	10	22
Percentage	52%	23.30%	6.70%	14.70%

Table 3: The highest level of education obtained of the sample population.

	Highest Level of education obtained					
	Secondary	Diploma	Associate Degree	Bachelor	Masters	Doctorate
Frequency (n = 150)	44	30	1	45	16	14
Percentage	29.30%	20%	0.70%	30%	10.70%	9.30%

5.2 Research questions and findings

This section examines the research questions and the hypotheses and outlines the results from various analyses undertaken to answer them.

Question 1: How people perceive and interact with food choices?

To understand people's perceptions and interactions with food choices, questions from the questionnaire were compared with demographic information. From the total sample population, 68% (n = 102) either 'strongly agreed' or 'agreed' with the statement; "Do you consider yourself to be living a healthy lifestyle". Women indicated a higher response rate 73% (n = 64) than males 60% (n = 38). With regards to age, individuals in the 40-55 age category, (85.7 %) were more likely to report they were living a healthy lifestyle than those in the 18 – 24 year old group (68%). Also the highest level of education and income shows the highest percentage in the category >\$750000 at 82% and participants who have obtained a doctorate at 78%.

When analysing the perceptions of healthy eating and demographic profiles, the data gathered indicated that 99% of the respondents stated they either 'agree' or 'strongly agree' that including fruits and vegetables in their diet is healthy, 82% considered including grains in their diet healthy and 73% considered reduced intake of fat, salt and sugar healthy. Tables 4 and 5 provide a complete analysis of people's perceptions of what constitutes healthy eating broken down by demographics.

Table 4: Perceptions of healthy eating and the difference between gender and age.

	Gender		Age			
	Male (n=63)	Female (n=87)	18 - 24 (n=81)	25 - 39 (n=43)	40 - 55 (n=21)	56 - 69 (n=5)
Healthy diet includes white meat	42	60	63	26	12	1
%	67%	69%	78%	60%	57%	20%
Healthy diet includes red meat	31	52	53	21	8	1
%	49%	60%	65%	49%	38%	20%
Healthy diet includes vegetable and fruits	61	87	80	42	21	5
%	97%	100%	99%	98%	100%	100%
Healthy diet includes dairy products	34	57	52	25	14	0
%	54%	65%	83%	58%	67%	0%
Healthy diet includes grains	47	76	65	33	21	4
%	74%	87%	78%	77%	100%	80%
Reduced fat, sugar and salt	42	68	56	34	15	5
%	67%	78%	69%	79%	71%	100%
Healthy diet includes organic foods	30	34	40	19	2	3
%	48%	69%	49%	44%	9.5%	60%
Healthy diet includes cooked foods	31	46	45	24	8	0
%	49%	53%	55.5%	56%	38%	0%
Healthy diet includes salads	37	50	39	29	14	5
%	59%	58%	48%	67%	67%	100%

Table 5: Perceptions of healthy eating and average income per annum.

	Average income per annum			
	>25K (n=78)	25 -50K (n=35)	50 - 75K (n=10)	<75K (n=22)
Healthy diet includes white meat	57	24	8	11
%	73%	68%	80%	50%
Healthy diet includes red meat	45	21	6	10
%	58%	60%	60%	45%
Healthy diet includes vegetable and fruits	77	35	10	22
%	99%	100%	100%	100%
Healthy diet includes dairy products	48	20	7	12
%	62%	57%	70%	55%
Healthy diet includes grains	59	31	10	21
%	76%	89%	100%	95%
Reduced fat, sugar and salt	54	27	8	18
%	69%	77%	80%	82%
Healthy diet includes organic foods	41	14	3	5
%	53%	40%	30%	23%
Healthy diet includes cooked foods	48	14	5	9
%	61%	40%	50%	41%
Healthy diet includes salads	39	22	9	14
%	50%	63%	90%	64%

Table 6: Perceptions of healthy eating and the level of education.

	Level of education					
	Secondary (n=44)	Diploma (n=30)	Associate Degree (n=1)	Bachelor (n=45)	Masters (n=16)	Doctorate (n=14)
Healthy diet includes white meat	32	19	0	35	8	8
%	73%	63%	0%	78%	50%	57%
Healthy diet includes red meat	30	17	0	25	4	7
%	68%	57%	0%	56%	25%	50%
Healthy diet includes vegetable and fruits	44	29	1	45	15	14
%	100%	97%	100%	100%	94%	100%
Healthy diet includes dairy products	32	17	1	23	10	8
%	73%	57%	100%	51%	63%	57%
Healthy diet includes grains	39	23	1	35	12	13
%	89%	77%	100%	78%	75%	93%
Reduced fat, sugar and salt	33	23	0	30	11	13
%	75%	77%	0%	67%	69%	93%
Healthy diet includes organic foods	16	13	0	27	6	2
%	36%	43%	0%	60%	37.5%	14%
Healthy diet includes cooked foods	23	15	0	28	7	4
%	53%	50%	0%	62%	44%	29%
Healthy diet includes salads	30	16	1	20	12	8
%	68%	53%	100%	44%	75%	57%

What is interesting is that when looking at age, salads, which are often promoted as healthy options at fast food outlets, are rated much lower than vegetables in general and on par with red meat. The exception to this is the older age group but this may be because their perception of what constitutes a salad is not the same as the younger age groups who are more likely to have been exposed to fast food salad options. Additional analysis was undertaken using the question; ‘How often do you include a wide range of healthy food items in your diet?’ The results indicated that 96% of the total sample population stated that they included healthy food items in their diet at least once a week or more. In terms

of gender, of the total sample of females, 98% indicated they include healthy food items at least once a week or more while 94% of the males indicating the same. In terms of age, there was very little difference between the age categories with 100% of 55-69 year olds, 98% of 25 -39 year olds and 95% of 18 -24 and 40 – 55 year olds stating that they included healthy food items in their diet at least once a week.

To understand the cultural influence on perceptions of healthy eating, the total sample population was categorised as Australia (49%, n = 74), Asian (34%, n = 50), African (9%, n = 13), European (4%, n = 6) and Middle Eastern (2%, n = 3) based on the country in which the respondent had spent most of their time. The perceptions of healthy eating and the cultural influence can be seen in Table 7.

Please note that for purposes of analysis the categories with less response rate (African, European, Middle Eastern) have not been included to limit analysis to the major categories of responses.

Table 7: Perceptions of healthy eating and continent of primary residence.

	Australian n = 74	Asian n = 50
Healthy diet includes white meat	49	34
%	66%	68%
Healthy diet includes red meat	45	25
%	61%	50%
Healthy diet includes vegetable and fruits	74	50
%	100%	100%
Healthy diet includes dairy products	44	30
%	59%	60%
Healthy diet includes grains	65	39
%	88%	78%
Reduced fat, sugar and salt	55	37
%	74%	74%
Healthy diet includes organic foods	27	24
%	36%	48%
Healthy diet includes cooked foods	33	31
%	45%	62%
Healthy diet includes salads	48	21
%	65%	42%

a) Hypothesis Testing

In order to better understand the perceptions and interactions with healthy food choices the research hypothesis will be discussed as follows. The hypothesis of this study was focused on examining the influence of an individuals' locus of control and cultural values as well as the demographic factors. In order to analyse one's locus of control this study used the data gathered from two of the survey questions. The questions used were; "Good health is influenced mainly by factors over which the individual has no control" and "Most illnesses can be avoided if you take the right steps". The response rate for the two questions can be seen in the following tables.

Table 8: Response rate for the statement “Good health is influenced mainly by factors over which the individual has no control”.

“Good health is influenced mainly by factors over which the individual has no control”.	N	Combined total %
1. Strongly agree	3	2%
2. Agree	35	23.5%
3. Neither agree nor disagree	34	22.6%
4. Disagree	53	35.3%
5. Strongly disagree	25	16.6
Total	150	100%

Table 9: Response rate for the statement “Most illnesses can be avoided if you take the right steps”.

“Most illnesses can be avoided if you take the right steps”.	N	Combined total %
1. Strongly agree	42	28%
2. Agree	75	50%
3. Neither agree nor disagree	23	15.3%
4. Disagree	10	6.7%
5. Strongly disagree	0	0%
Total	150	100%

According to the tables above, the results indicate that the majority of the respondents believe that they are in control of their health. The cultural values were linked with the personal values and were categorised using factor analysis. Therefore factor analysis was conducted on nine of the statements used to determine the personal values of the respondents in terms of healthy food consumption. Respondents had rated these statements in the questionnaire on a 5-point likert scale, where 1=strongly agree and 5=strongly disagree. The sample size of the sample population meets the requirements to

conduct a factor analysis (150 respondents for a 9-item scale). An examination of the correlation matrix indicated that a considerable number of correlations exceed 0.3 and that it is also evident that the Kaiser Meyer-Olkin measure of sample adequacy is 0.726 which is greater than 0.6. Hence, the assumption of the correlations matrix is satisfied and is suitable for a factor analysis. Due to the complexity of the variables varimax rotation was used to interpret the significance of the variables. The following table provides the results of the factor analysis.

Table 10: Rotated component matrix.

	Factor			Extraction	Extraction % of variance
	1	2	3		
	Dynamics	Conservatives	Hedonists		
Creates a sense of self fulfillment	0.669			0.688	
Creates warm relationships	0.588			0.381	
Creates a sense of belonging	0.576			0.411	
Creates a sense of self respect	0.461			0.32	33.895
Creates a sense of security		0.704		0.537	
Creates a sense of accomplishment		0.692		0.522	
Creates a sense of well being		0.445		0.359	11.435
Enjoyment & fun			0.902	0.823	
Excitement			0.667	0.581	6.026

According to the table above, it can be seen that out of the nine variables three can be extracted because they have eigenvalues > 1. These three factors explain 51% of the variance. That is, factor 1 accounts for 33.9%, factor 2 11% and factor 3 6%. Based on

the variables, factor 1 can be categorised as Dynamic Cultural Values, factor 2 as Conservative Cultural Values and Factor 3 as Hedonistic Cultural Values. Cronbach's Alpha was used to test the reliability of the factors derived through the factoring. The results indicated that statistically it was reliable with the Cronbach's Alpha for the overall scale at 0.803.

Regression analysis, ANOVA and T-tests were used to test the research hypotheses. Regression analysis was used to examine the best prediction of a dependent variable from several independent variables. In this study the dependent variable for the Regression analysis was the statement "Good health is influenced by factors over which individuals has no control" and the independent variables were, Dynamic, Conservative and Hedonistic Cultural Values (the factors that were derived from the factor analysis). The assumption of multicollinearity was sufficient to conduct a Multi Regression analysis. The results of the regression analysis indicated that the overall relationship between cultural values and locus of control was significant with a figure of .005 but only two factors were actually significant in explaining the dependent variable. That is, only Dynamic cultural values and Hedonistic cultural values had a significant relationship with locus of control (Good health is influenced by factors over which individuals has no control), with a figure of .020 and .012 respectively ($<.05$). However, according to the Regression analysis, Conservative cultural values had no influence on predicting the influence of locus of control.

Another regression analysis conducted indicated that the overall relationship between cultural values and locus of control in terms of the statement, “Illnesses can be avoided if the right steps are taken” is also significant ($p = .000$). However, only two out of the three factors (conservative and hedonistic cultural values and locus of control) were significant with a value of .006 and .002 respectively. The following tables provide the results of the regression analysis.

Table 11: The relationship between the statement “Good health is influenced by factors over which individuals has no control” and cultural values.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Dynamics	0.193	0.020
Conservatives	0.064	0.432
Hedonists	-0.201	0.012

Table 12: The relationship between the statement “Illnesses can be avoided if the right steps are taken” and cultural values.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Dynamics	.079	.325
Conservatives	.224	.006
Hedonists	.239	.002

ANOVA was also conducted to test the significance between the cultural values and locus of control. According to the results of the Levene test for homogeneity of variances were >0.05 (1.871, 1.876 and 0.886) for the three factors and therefore the interpretation of ANOVA was valid. However the results indicated that the overall relationship between cultural values and the locus of control in terms of the statement, “Good health is influenced by factors over which individuals has no control) was not significant but only one of the factors (dynamic cultural values and locus of control was significant with a value of 0.027. ANOVA conducted to examine the significance of the relationship between the statement “Illnesses can be avoided if the right steps are taken” and cultural values indicated a significance between Conservative cultural values and locus of control with a figure of 0.013 and hedonistic cultural values and locus of control with .020 significance. Therefore the research hypothesis (H_1 : With regard to healthy eating, individuals with conservative values will be significantly influenced by their locus of control and H_2 : With regard to healthy eating, individuals with hedonistic values will be significantly influenced by their locus of control) is supported.

In order to examine the significance of the remaining hypotheses, another series of descriptive analyses (Crosstabs) were conducted. The statement, “Good health is influenced by factors over which individuals has no control” (statement one) in comparison with the demographic factors indicated that, of the overall female sample population, 56.3% ($n = 49$) either ‘disagreed’ or ‘strongly disagreed’ while, of the overall male sample population, 46% ($n = 29$) too either ‘disagreed’ or ‘strongly disagreed’ with the above statement. Also the statement “Illnesses can be avoided if the right steps are

taken" (statement two), when compared with gender, results indicated that of the overall female population 78.2% (n = 68) either 'agreed' or 'strongly agreed' while, of the overall male sample population 77.8% (n = 49) too either 'agreed' or 'strongly agreed' with the statement. Therefore the results indicate that there is no significant difference between males and females with regard to the extent to which they believe they are in control of their health.

Regression analysis conducted to examine the significance of the dependent variable (statement one) and the independent variables (gender, age, income and education) indicated that overall it was significant with a value of 0.000 and 39% of the variances were explained. However, only income was shown as being significant with the statement with a value of 0.000. Regression analysis conducted to examine the significance of the dependent variable statement two) and the independent variables (gender, age, income and education) indicated that overall it was significant with a value of 0.017 but individually it was not found to be significant. The following tables will indicate the results as follows.

Table 13: The relationship between the statement “Good health is influenced by factors over which individuals has no control” and demographic factors.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Gender	0.128	0.089
Age	0.000	0.998
Income	0.506	0.000
Education	-0.125	0.159

Table 14: The relationship between the statement “Illnesses can be avoided if the right steps are taken” and demographic factors.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Gender	-0.033	0.686
Age	0.134	0.242
Income	0.228	0.067
Education	-0.155	0.111

Results generated from T-tests were also consistent with the Regression analysis findings. That is, the results indicated that the relationship between income and the statement “Good health is influenced by factors over which individuals has no control” was significant with a value of 0.000. Also the statement “Illnesses can be avoided if the right steps are taken” was found to be significant with income as well as age with a figure of 0.001 and 0.000 respectively.

Therefore based on the analysis (Regression analysis and T-test) it can be stated that only one of the four hypotheses was supported. That is, H3c: With regard to healthy eating, an individual's income will have a significant influence on an individual's locus of control.

Question 2: What motivational aspects will have an impact on people's food choices?

In order to understand what motivational factors have an impact on people's food choices this study examined the respondent's answers to the question, "have you changed your diet in the past 5 years?". The results indicated that 68% of the total sample population said yes. According to the research findings the main motivational factor to change the respondent's diet is weight loss (67%), followed by health related issues (44%) and ethical concerns (15%). Regression analysis was conducted to examine the significance between the motivational factors influencing people's food choices (Dependent variables) and changing their diet (Independent variable). The results indicated that overall it was significant at 0.038 but the coefficients indicated only weight loss was significant as a motivational factor at 0.024. This can be shown in a table as follows.

Table 15: The relationship between changing one's diet and motivational factors.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Weigh loss	0.228	0.024
Health related issues	0.163	0.104
Ethical concerns	-0.113	0.250

Also further Regression analyses indicated that there can be a significant relationship between personal values and maintaining a healthy lifestyle. Results indicated that overall the relationship was significant at 0.001 (< 0.05) but however only two of the nine personal values indicated a significant relationship as a motivational factor for healthy eating. That is enjoyment ($0.015 < 0.05$) and self respect ($0.035 < 0.05$).

Question 3: How will availability of more choice of food have an impact on people's decision making of maintaining a healthy lifestyle?

In order to examine the impact of availability of more choice of food and maintaining a healthy lifestyle, two statements from the survey questionnaire were analysed. The two statements were; "If there was more variety, I would enjoy eating healthy" (statement one) and "I am interested in trying new foods or combinations of ingredients" (statement two). The results indicated that 44% of the sample population either 'strongly agreed' or 'agreed' with statement one and 78.7% either 'strongly agreed' or 'agreed' with statement two. Further analysis indicated that of the total sample population, 49% ($n = 31$) males were more likely to agree (49%) with statement one than females (40%). On the other hand females were slightly more likely to agree with statement two (80% vs. 76%).

Regression analysis was conducted for both statements to examine if the independent variables such as age, gender, income and age were correlated with the dependent variable (statement one and statement two). The results for statement one and the demographic factors indicated that overall it was significant at 0.000 but only income and education indicated to be significant at 0.000 and 0.002 respectively. The results for

statement two and the demographic factors revealed that overall it was not significant at 0.445 and all four independent variables too were not significant predictors in determining the interest to try new foods and demographic characteristics. The following table will indicate the results as follows.

Table 16: The relationship between the statement, "If there was more variety, I would enjoy eating healthy" and demographic factors.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Gender	0.095	0.231
Age	-0.054	0.627
Income	0.440	0.000
Education	-0.299	0.002

Table 17: The relationship between the statement, "I am interested in trying new foods or combinations of ingredients" and demographic factors.

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
Gender	-0.049	0.563
Age	0.148	0.212
Income	-0.215	0.092
Education	0.024	0.812

Question 4: Why are people's perceptions on healthy foods inconsistent with their behaviours and do learning theories such as social and operant learning have any connection with the inconsistency of nutritional knowledge put to practice?

In order to examine this research question five questions from the survey questionnaire were analysed. The questions analysed were, "Do you consider to be living a healthy lifestyle?", "How often do you include a wide range of healthy food items in your diet?", "I tend to follow what others think is healthy rather than what I consider is healthy", "I always practice what I learn about nutrition" and "It's hard to get excited about healthy foods when I don't see any results fast".

When examining the level of nutritional awareness, 64% of the total sample population indicated that they are either 'extremely satisfied' or 'satisfied'. In terms of gender results females (75%) indicated a higher level of nutritional awareness than males (49%). Further analysis indicated that the top three sources of nutritional knowledge was found to be knowledge picked up from everyday life (65%), family (61%) and television (56%). Further results indicated that in terms of demographic factors and sources of nutritional knowledge (personal experience), females (70%) indicated a higher response rate for knowledge picked up from everyday life compared to the total sample population of males (57%). In terms of age of the total sample population of 40-55 age category, respondents rated the highest response rate at 71% compared to other age categories. Level of education was also assessed and of the total sample population of respondents who has obtained secondary level education rated the highest at 77% than other categories.

In terms of television, out of the total sample population of males, 59% was higher than the total sample population of females (54%). Results also indicated that in terms of family, females (62%) rated higher than males (59%). Therefore it can be assumed that males can be better visual learners as opposed to females who can be better social learners. Further empirical research will be needed to examine this relationship.

In order to examine results in terms of learning, the statement, “I tend to follow what others think is healthy rather than what I consider is healthy” was analysed in relation to social learning and the statement, “It’s hard to get excited about healthy foods when I don’t see any results fast” in relation to operant learning. The response rates for the two statements can be stated as follows.

Table 18: The response rate for the statement, “I tend to follow what others think is healthy rather than what I consider is healthy”.

“I tend to follow what others think is healthy rather than what I consider is healthy”	N	Combined total %
1. Strongly agree	1	0.7%
2. Agree	19	13%
3. Neither agree nor disagree	38	25.3%
4. Disagree	60	40%
5. Strongly disagree	32	21%
Total	150	100%

Table 19: The response rate for the statement, "It's hard to get excited about healthy foods when I don't see any results fast"

"It's hard to get excited about healthy foods when I don't see any results fast"	N	Combined total %
1. Strongly agree	8	5%
2. Agree	49	33%
3. Neither agree nor disagree	38	25%
4. Disagree	39	26%
5. Strongly disagree	16	11%
Total	150	100%

Based on the research results it can be seen that majority of the sample population responded to operant learning because according to Table 18, 61% of the respondents either 'disagreed' or 'strongly disagreed' with the statement "I tend to follow what others think is healthy rather than what I consider is healthy" and 38% (n = 57) either 'strongly agreed' or 'agreed' with the statement, "It's hard to get excited about healthy foods when I don't see any results fast". When analysing the response rate and gender in relation to the two statements, it was identified that out of the total sample male population rated higher at 14.3% than the total sample female population (12.6%) by either 'strongly agreeing' or 'agreeing' with the statement, "I tend to follow what others think is healthy rather than what I consider is healthy". Also out of the total sample male population rated higher 40% than the total sample female population (37%) by either 'strongly agreeing' or 'agreeing' with the statement, "It's hard to get excited about healthy foods when I don't see any results fast".

In terms of examining if nutritional knowledge is actually put to practice one of the statements from the survey questionnaire was analysed. That is, “I always practice what I learn about nutrition”. According to the descriptive analysis (Frequencies) carried out the response rate can be shown in a table as follows.

Table 20: The response rate for the statement, “I always practice what I learn about nutrition”.

“I always practice what I learn about nutrition”.	N	Combined total %
1. Strongly agree	10	7%
2. Agree	52	35%
3. Neither agree nor disagree	47	31%
4. Disagree	38	25%
5. Strongly disagree	3	2%
Total	150	100%

The results indicated that 42% of the total population stated that they either ‘strongly agree’ or ‘agree’ with the statement “I always practice what I learn about nutrition”. The results also revealed that 43% of the total male sample population indicated that they either ‘strongly agreed’ or ‘agreed’ with the above statement which was higher than the total female sample population (40%).

A series of Regression analyses were carried out to examine if there is a significant relationship between learning and inconsistency of nutritional knowledge put to practice. In the first analysis, the question “Do you consider to be living a healthy lifestyle?” was considered as the dependant variable while, the question “How often do you include a wide range of healthy food items in your diet?” and the statement “I always practice what I learn about nutrition” were considered as the independent variables. The results

indicated that there was overall as well as individual significant relationship between the statements at 0.000. The results of the analysis can be shown as follows.

Table 21: The relationship between the question, "Do you consider to be living a healthy lifestyle?" and the question, "How often do you include a wide range of healthy food items in your diet?" and the statement "I always practice what I learn about nutrition".

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
"How often do you include a wide range of healthy food items in your diet?"	0.389	0.000
"I always practice what I learn about nutrition"	0.291	0.000

The second Regression analysis was conducted to examine the significance of the statement, "I always practice what I learn about nutrition" (dependant variable) and the statements, "I tend to follow what others think is healthy rather than what I consider is healthy" and "It's hard to get excited about healthy foods when I don't see any results fast" (independent variables). The results indicated that overall the statements indicated to have a significant relationship at 0.011. However individually only the statement "I always practice what I learn about nutrition" and the statement "It's hard to get excited about healthy foods when I don't see any results fast" was significant at 0.003 while the statement "I tend to follow what others think is healthy rather than what I consider is healthy" was found to be not significant at 0.181 (>0.05). The results can be shown in a table as follows.

Table 22: The relationship between the statement, "I always practice what I learn about nutrition" and the statements, "I tend to follow what others think is healthy rather than what I consider is healthy" and "It's hard to get excited about healthy foods when I don't see any results fast".

Coefficients		
Independent variables	Standardized coefficients	
	Beta	Sig.
"I tend to follow what others think is healthy rather than what I consider is healthy"	0.123	0.181
"It's hard to get excited about healthy foods when I don't see any results fast"	-0.280	0.003

However a T-test was also conducted to examine the above statements and the significance of the relationship. Results indicated that only the statement "I always practice what I learn about nutrition" and the statement, "It's hard to get excited about healthy foods when I don't see any results fast" was significant at 0.029, indicating that people who practice what they learn about nutrition do not get excited about healthy foods when they do not see results fast.

Question 5: What barriers exist to influence people's healthy eating behaviour?

This research question was examined by analysing the question “What do you consider as barriers to healthy eating?”. The results indicated that when asked to rate from 1-6 (1 being the highest barrier) lack of time was considered as the number one barrier with a response rate of 26.7%, followed by lack of convenience and knowledge (25.3%) then price (21.3%), taste (22.7%) and finally lack of variety (30%). Also 96% of the total sample population either ‘strongly agreed’ or ‘agreed’ with the statement “I believe that cultural values will have an impact on eating healthy food”. Further descriptive analysis (crosstabs) indicating the difference between the response rate for the barriers to eating healthy and gender and age can be found in the following table.

Table 23: The difference between the response rate for the barriers to eating healthy and gender and age

Barriers for healthy eating	Gender		Age	
	Male (n=63)	Female (n=87)	18 – 24 (n=81)	25 - 39 (n=43)
Lack of time	17 27%	23 26%	24 30%	11 26%
Lack of knowledge	17 27%	21 24%	23 28%	7 16%
Lack of convenience	15 24%	23 26%	19 23%	11 26%
Price	14 22%	18 21%	16 20%	10 22%
Taste	11 17%	23 26%	15 18.5%	9 20%
Lack of variety	20 32%	25 29%	20 25%	9 21%
Cultural values	42 67%	54 62%	54 67%	28 65%

Overall the results of the analysis indicated that with regard to healthy eating, females perceived to be living a healthy lifestyle compared to males. However in relation to the food categories analysed with regard to perceptions of healthy eating it was found that the female response rate was higher in all food categories except for 'salad consumption' compared to the total male sample population. Also results indicated that females had a higher level of nutritional awareness males showed a higher percentage in terms of nutritional knowledge put to practice. With regard to locus of control and cultural values, results indicated that people with conservative and hedonistic cultural values are significant in predicting the extent to which one believes they are in control of their health. However in terms of demographic factors and locus of control, only income was found to be a significant factor. The current research findings will be further discussed in relation to previous research in the following section.

6.0 Conclusions, Implications and Future Research

6.1 Review of the study

This section will provide a summary of the current study and discuss the research results in relation to the previous research discussed in the literature review with a view to providing answers to the research questions and implications for future research.

To understand the perceptions of healthy eating certain food related perceptions were analysed in comparison to the respondents' demographic characteristics.

In terms of the respondents' fruit and vegetable consumption, it was found that 69% of females and 67% of males responded positively. This is higher than what the Australian Bureau of Statistics found in their survey results for 2007-08 revealing 56% females and 46% males met the recommended daily intake of vegetables. It was also found to be consistent with the research findings of Fagerli & Wandel (1999) cited in Luomala et al. (2006) which stated that "women consumed more fresh vegetables and fruits than men".

In terms of consumption of salad and cooked food, this study revealed that the majority of the respondents perceived salads (58%) as a healthier option to cooked food (51%). This is consistent with research by Burg et al. (1995) cited in Astill et al. (2004), that found, cooking is more time consuming and therefore salads are preferred as a better option to increase the vegetable consumption. On the other hand with regard to culture, results revealed that Asians had a higher preference for cooked meals (62%) than Australians (45%).

Previous research by Mark and Alan (1993) in terms of meat consumption stated that manual working class households or lower socio-economic households consumed high amounts of cooked meat and was assumed that this could be due to the fact of meat-masculinity association which derives from the stereotypical depiction of strength as a masculine characteristic. The results of Beardsworth et al. (2002) also revealed consistent results stating that an overall majority of males agreed that consumption of meat is perceived as healthy compared to females. The current research revealed that \$25,000 - \$50,000 income range with only secondary level education rated the highest preference for consumption of red meat which is only consistent in terms of education. This could be because the sample population for the current research was selected from an educational institution and majority of the respondents were students. On the other hand findings in terms of gender indicated rather contrasting results. That is, females (60%) indicated a higher preference for consumption of red meat than males (49%). This is also in contrast with the research findings of Kubberod et al. cited in Luomala et al. (2006) where males displayed higher preference for red meat while females displayed a higher preference for white meat. This difference however could be due to the cultural mix of the sample population. For example, 68% of the Asian respondents considered consumption of white meat as part of a healthy diet which was slightly higher than the Australian respondents (66%) while 61% of the Australian respondents considered consumption of red meat as part of a healthy diet which was significantly higher than the Asian respondents (49%).

Previous research by Claude & Paquette (2005), indicated that children and adolescents included dairy products in their definition of healthy eating. However this was found to

be consistent in the current research with results indicating that 83% of the total sample population in the age category 18-24 agreed with the statement "A healthy diet should always include dairy products". The current research also provides consistent results with regard to gender and organic food consumption. That is, a study conducted by Lea & Worsley, 2005 indicated that women are more likely to buy organic foods than men. The current study too indicated similar results with 69% of the total sample female population rating higher than the total sample male population (48%). However overall in terms of perception of healthy eating and demographic factors, Regression analysis conducted was significant at 0.001 (<0.05) but only gender and income was found to be a significant predictor at 0.025 and 0.001 respectively.

With regard to the motivational influences for healthy eating, it was revealed that weight loss was more influential than health related issues. Results also indicated that the respondents who agreed to weight loss being the most motivational factor to select healthy food options, 98.5% stated that they included a wide range of healthy foods once a week or more. Whereas of the respondents who stated health related issues and ethical concerns as motivational factors, only 93% included a wide range of healthy foods in their diet at least once a week or more. In terms of weight loss results indicated that respondent in the age categories 40-55 and 56-69 rated the highest with 100% followed by 18-24 age category (65.5%) and 25-29 (63%). However further research with regard to this finding will be needed as the sample size of the age category 55-69 is only 3 and is not a sufficient sample size to be representative of the actual population. With regard to gender and weight loss as a motivational factor, it was found males (69%) actually rated

it as a motivational factor more often than females (65%). The current research also revealed that personal values such as enjoyment and self respect were highly influential factors for motivation for healthy eating. This is also consistent with what Beardworth et al. (2002) found in their study stating that the personal value of fun and enjoyment as a motivational factor is relevant to lead a healthy lifestyle. Further Regression analyses conducted revealed that availability of variety and the interest in trying new foods did not show a significant relationship with the respondent who said that they consider they are living a healthy lifestyle. Therefore it appears that variety and interest in trying new food will not necessarily lead one to move towards healthy living.

When considering the nutritional awareness, the current research indicated consistent results with previous research findings indicating 75% of the total female sample population rated a higher level of nutritional awareness compared to males 49%. That is, Ball et al. (1995) and Luomala et al. (2006) indicated that women were found to be more knowledgeable than men. Previous research by Brown et al. (2000) indicated that there remains a significant gap between consumers' nutrition knowledge and their ability to implement such knowledge into the reality of their daily food behaviour. The current research indicated that 42% of the total sample population actually practiced what they learnt about nutrition; however, 58% did not. Therefore it is consistent with the previous research findings. The current research however examined the reasons by conducting regression analyses to measure the significant predictors. The findings indicated that

overall, nutritional knowledge put to practice and demographic factors was not significant ($0.122 > 0.05$) but nutritional knowledge put to practice and education was found to be a significant predictor ($0.039 < 0.05$). In terms of learning, and nutritional knowledge put to practice, it was evident that only operant learning (“It’s hard to get excited when I don’t see any results fast”) was a significant predictor ($0.029 < 0.05$). The results obtained from a Regression analysis indicated that out of the nine personal values only one (I am excited to have a healthy meal) was found to be significant with maintaining a healthy lifestyle at 0.039. This research finding is consistent with the results of the research by Divine & Lepisto (2005). Also another research finding which was found to be consistent with the research findings of Beardsworth et al. (2002) was that majority of the respondents believed that they were responsible for their own health (52%). However, with regard to barriers of healthy eating, results indicated that, males considered lack of time, knowledge, price, variety and cultural values as barriers while, females considered lack of convenience and time as barriers for healthy eating.

6.2 Implications of the research

This study has contributed towards expanding the marketing literature in terms of people’s perceptions of healthy eating and its relationship with the marketing dynamics. Firstly, the study has contributed to the understanding of perceptions of healthy eating by examining the interaction between demographic, cultural values as well as individual learning.

The results from this research indicated some contrasting results compared to previous findings. For example, consumption of meat (white and red) was perceived as healthier among the female sample population than males. The results also indicated that in terms of demographic influences gender and income were significant predictors of maintaining a healthy lifestyle. Also new information concerning cultural values and locus of control was examined emphasising the importance of understanding the psychological influence with regard to healthy eating. Therefore the results indicated that in terms of healthy eating, Conservative and Hedonistic cultural values were significant predictors of locus of control.

Main motivational factors concerning healthy eating was identified as weight loss, health related issues and ethical concerns. In terms of importance of availability of health food options, the results indicated that males are more concerned about variety compared to females. Education and income were found to be significant predictors for preference for variety of healthy food choices. On the other hand females preferred novelty that males. Personal values were also analysed as motivational factors and the results revealed that enjoyment and self respect as significant motivational factors influencing healthy food consumption. This information will also provide an important insight for marketers in order to accurately identify their target market as well as to effectively understand the underlying consumer needs especially in areas such as advertising, promotion and product positioning.

An understanding of consumer learning related to nutritional knowledge is also an important aspect of marketing. Therefore the results of this study indicated that males wanted to experience fast results of healthy eating and they also tend to follow others with regard to healthy choices than what they perceive as healthy food options. However results also indicated that males often did not practice what they learn about nutrition. Barriers for healthy eating were identified as lack of time, lack of convenience and knowledge and price.

However overall the results from this research can be significant not only for marketing literature but also for practical purposes such as to provide an insight for marketers as well as any other parties (government policy makers, healthy care organisations) interested in promoting healthy living, to better understand their target population, understand the significance of consumer learning and also in general to have a better understanding of the current trend towards healthy living.

6.3 limitations of this study and suggestions for future research

There are certain limitations identified in this research. In terms of methodology the sample size selected is not adequate and is not representative of the total population but statistically, for analysing purposes the sample size selected was adequate. Also, a convenience sample of students and staff of Edith Cowan University was used and therefore is not representative of Australia or worldwide. Hence any further generalizations should be made cautiously, and further research in this area will be necessary.

Certain findings of this study will require further analysis because, the areas investigated does not have any empirical research to support the consistency of the current findings. For example, areas such as consumer learning and nutritional awareness and locus of control and consumer learning. The cultural characteristics examined are only based on a small sample population within Edith Cowan University and therefore findings may be biased and therefore further investigation with regard to this area of research will be required.

6.4 Conclusion

This study has contributed towards existing market research in terms of the healthy food segment but most importantly extended the information that is critical for any marketer. Also, this research emphasizes the significance of the psychological influences related to marketing dynamics providing a starting point for the future of research related to perceptions of healthy eating.

Appendices

Appendix A: Personal interview questions

1. "How do you define healthy eating?"
2. "What foods do you see as 'unhealthy'?"
3. "Where do you get your nutrition information from?"
4. "What influences the way you choose food?"
5. "Do cultural values influence your consumption of food?"
6. "What are the benefits of healthy eating?"
7. "Will availability of more variety have an impact on healthy food consumption?"
8. "What are the barriers to healthy eating?"

Appendix B: Survey questionnaire: Perceptions of healthy foods

1) Do you consider yourself to be living a healthy lifestyle? (Please rate)

Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly Disagree
1	2	3	4	5

2) How often do you include a wide range of healthy food items in your diet?

- More than once a day
 Once a day
 Four to six times per week
 One to three times per week
 less than once a week
 never

3) How satisfied are you with your level of nutritional awareness? (Please rate)

Very Satisfied	Satisfied	Neither satisfied or dissatisfied	Somewhat satisfied	Dissatisfied
1	2	3	4	5

4) How did you learn about food nutrition? Please select one or more of the following sources.

- Knowledge picked up in everyday life
 Television
 Radio
 Print media
 Family members
 School
 Books
 Doctors/Nurses
 Fitness centers/Dietitians
 College/University
 Friends
 Others (please specify).....

5) Please rate the following.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
A healthy diet should always include white meat .	1	2	3	4	5
A healthy diet should always include red meat .	1	2	3	4	5
A healthy diet should always include vegetables and fruits .	1	2	3	4	5
A healthy diet should always include diary products .	1	2	3	4	5
A healthy diet should always	1	2	3	4	5

include grains .					
A healthy diet should always reduce fat, salt and sugar intake	1	2	3	4	5
A healthy diet should always include organic foods.	1	2	3	4	5
I consider a cooked dinner consisting of meat, potatoes and vegetables as the basis for a good diet.	1	2	3	4	5
I consider raw vegetables/salads to be healthier than cooked meals.	1	2	3	4	5

6) Have you changed your diet in the past 5 years?

- Yes No (please skip to question 6b.)

6a) If yes, please select one or more of the following reasons as to why you changed your diet.

- Concerns with reducing weight Health related issues
 Concerns with food safety Inclination towards novelty
 Ethical concerns (environmental and animal welfare)
 Other (please specify).....

6b) If no, Please select one or more of the following.

- I always ate healthy. I don't want to change my eating habits.
 I don't believe in eating healthy. I will never change my diet.
 I ate only what I like. Other (please specify).....

7) Please rate the following.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I tend to follow what others think is healthy rather than what I consider a healthy meal.	1	2	3	4	5
I always practice what I learn about nutrition.	1	2	3	4	5

It's hard to get excited about healthy foods when I don't see any results fast.	1	2	3	4	5
I think healthy foods are tasteless and boring to eat.	1	2	3	4	5
If there was more variety, I would enjoy eating healthy.	1	2	3	4	5

8) When I eat healthy food, I do it because; (please rate the following).

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I enjoy having a healthy meal.	1	2	3	4	5
I am excited to have a healthy meal.	1	2	3	4	5
I want to feel a sense of belonging.	1	2	3	4	5
I believe it creates a sense of well being.	1	2	3	4	5
I feel eating healthy food creates warm relationships with friends and family.	1	2	3	4	5
Out of respect for myself.	1	2	3	4	5
To obtain a sense of self fulfillment.	1	2	3	4	5
I feel a sense of accomplishment when I eat healthy food.	1	2	3	4	5
I feel secure when I eat health food.	1	2	3	4	5
I am interested in trying new foods or combinations of ingredients.	1	2	3	4	5

9) Please rate the following

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe eating healthy food is more time consuming.	1	2	3	4	5
I believe eating healthy food is more expensive.	1	2	3	4	5
I believe eating healthy food is more stressful.	1	2	3	4	5
I believe that cultural values will have an impact on eating healthy food.	1	2	3	4	5

10) What do you consider as barriers to healthy eating? (Please rank the following from 1 to 6).

- Lack of knowledge Price Lack of time Taste
 Lack of variety Lack of convenience

11) Please rate the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am the kind of person who plans life ahead rather than one who lives life day to day.	1	2	3	4	5
Good health is influenced mainly by factors over which the individual has no control.	1	2	3	4	5
Most illnesses can be avoided if you take the right steps.	1	2	3	4	5

12) Gender

- Male Female

13) Age

- 18- 24 25-39 40-55 56-69

14) a) Country in which you were born?.....

b) Country in which your parents were born;

Father Mother

c) Country in which you have spent most of your life?

15) Average income per annum

- Below \$25000 \$25000 - \$50000 \$50000 – \$75000 Over \$75000

16) Work status

- Staff Student

16a) If staff

General Academic

16b) Staff/Student:

Full Time Part Time

17) Highest level of education obtained

Secondary education Diploma Associate degree
 Bachelor degree Masters Doctorate

Thank you for your time.

Reference list

- Alan, W., & Mark, T. (1993). Social class and change in eating habits, *British Food Journal*, 95(1), 3-8.
- Alexandra, A., Lumbers, M., & Wilson, L. (2004). Food access and dietary variety among older people, *International Journal of Retail And Distribution Management*, 32(2), 109-122.
- Anderson, A.S., & Morris, S.E. (2000). Changing fortunes: Changing food choices, *Journal of Nutrition And Food Science*, 30(1), 12-15.
- Armstrong, G., Durkin, M., & Hollywood, E.L. (2007). Using behavioural and motivationla thinking in food segmentation, *Internationla Journal of Retail & Distribution Management*, 35(9), 691-702.
- Astill, B., Nijmeijer, M., & Worsley, A. (2004). An exploration of the relationships between food lifestyle and vegetable consumption, *British Food Journal*, 106(7), 520-533.
- Australia: Food industry. Retrieved August 23, 2009, from www.dfat.gov.au/facts/foodindustry.html
- Australian social trends. Retrieved August 19, 2009, from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0>
- Ball, K., Blasche, R., Crawford, D., & Worsley, A. (1995), The relationship between education and food consumption, *Australian National Survey*.

- Beardworth, A., Bryman, Goode, J., Haslam, C., Keil, T., & Lancashire, E. (2002). Women, men and food: The significance of gender for nutritional attitudes and choices, *British Food Journal*, 104(7), 470-491.
- Beardsworth, A., Goode, J., Haslam, C., Keil, T., & Sherratt, E. (1995). Dietary dilemmas: Nutritional concerns of the 1990s, *British Food Journal*, 97(11), 3-12.
- Berry, D. (2004). Dairy Foods, *In Pursuit Of Wellness*, 105(5), 34-38.
- Brown, K., McIlveen, H., & strugnell, C. (2000). Nutritional awareness and food preferences of young consumers, *Journal of Nutrition And Food Science*, 30(5), 230-235.
- Berry, D. (2004), "In pursuit of wellness", *Dairy Foods*, 105(5), pp.34-8.
- Claude, M., & Paquette. (2005). Perceptions of healthy eating: State of knowledge and research gaps, *Canadian Journal of Public Health*.
- Cornwell, T.B., Juric, B., & Squires, L. (2001). Level of Market development and intensity of organic food consumption: Cross-cultural study of Danish and New Zealand consumers, *Journal of Consumer Marketing*, 18(5), 392-409.
- Crawford, I., Manyiwa, S. (2001). Determining linkages between consumer choices in a social context and the consumer's values: A means-end approach, *Journal of Consumer Behaviour*, 2(1), 54-70.
- Croll, K., Story, M., & Sztainer, D. (2001). Healthy eating: What does it mean to adolescents, *Journal of Nutritional Education*, 33(4), 193-199.

- Daghfous, N., John, V., & Frank, P. (1999). Values and adoption of innovations: A cross-cultural study, *Journal of Consumer Marketing*, 16(4), 314-331.
- Dawson, A.J., Marshall, D.W., & Shiu, C.E. (2004). Segmenting the convenience and health trends in the British food market, *British Food Journal*, 106(2), 106-127.
- Deliza R., Iop, C.F., & Teixeira, E. (2006). Consumer research: Extrinsic variables in food studies, *British Food Journal*, 108(11), 894-903.
- Department of health and ageing: Nutrition and healthy eating. Retrieved August 26, 2009, from www.health.gov.au/internet/.../health-pubhlth-strateg-food-index.htm
- Divine, R.L., & Lepisto, L. (2005). Analysis of the healthy lifestyle consumer, *Journal of Consumer Behaviour*, 22(5), 275-283.
- Dutra, A., Frary, J. & Wise, R. (2004). Higher-order needs drive new growth in mature consumer markets, *Journal of Business Strategy*, 25(5), 26-34.
- Fillion, L. & Kilcast, D. (2001). Understanding consumer requirements for fruit and vegetable texture, *Nutrition & Food Science*, 31(5), 221-225).
- Forsythe, S., Gu, Q., Kim, J., & Moon, S. (2002). Cross-cultural consumer values, needs and purchase behavior, *Journal of Consumer Marketing*, 19(6), 481-502.
- Francis, C., Lieblein, G., Torjusen, H., & Wandel, M. (2001). Food quality and preference, food system orientation and quality perception among consumers and producers of organic food, 12(3), 207-216.
- Frewer, L., Lambert, N., & Scholderer, J. (2003). Consumer acceptance of functional foods: Issues for the future, *British Food Journal*, 105(10), 714-731.
- Goldsmith, R.E., Freiden, J., & Henderson, K.V. (1995). The impact of social values on food related attitudes, *Journal of Product & Brand Management*, 4(4), 6-14.

- Goyan, P., Kathryn, P., Kittler, & Sucher. (2004). Accent on taste: An applied approach to multicultural competency, *Diabetes Spectrum*.
- Heinz, B., & Lee, R. (1998). Getting down to the meat: The symbolic construction of meat consumption, *Communication Studies*, 49(1), 86-100.
- House, J., Levy-Milne, R., & Su, J. (2006). Definitions of healthy eating among university students, *Canadian Journal of Dietetic Practice And Research*, 67(1), 14-19.
- Josiam, B.M., & Monteiro, P.A. (2004). Tandoori tastes: Perceptions of Indian restaurants in America, *International Journal of Contemporary Hospitality Management*, 16(1), 18-26.
- Keane, A. & Willetts, A. (1994). Factors that affect food choice, *Journal of Nutrition And Food Science*, 94(4), 15-17.
- Kwok, P., Nancarrow, O., & Wright, L.T. (2001). Case study: Food taste preferences and cultural influences on consumption, *British Food Journal*, 103(5), 348-358.
- Lea, E., & Worsley, T. (2005). Australians' organic food beliefs, demographic and values, *British Food Journal*, 107(11), 855-869.
- Luomala, H., Paasoara, R., & Lehtola, K. (2006). Exploring consumer's health meaning categories: Towards a health consumption meaning model, *Journal of Consumer Behaviour*, 5, 269-279.
- 'Marketing failure to blame' for Australia's obesity. Retrieved on August 13, 2009, from www.abc.net.au/news/stories/2009/08/27/2668836.htm

- Mei-Fang Chen. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle, *British Food Journal*, 111(2), 165-178
- Minor, M., & Mowen J. C. (1998). *Consumer Behavior*, 5th edition, Prentice hall international, New Jersey.
- Mothersbaugh, D., Herrmann, R., Warland, R. (2003). Perceived time pressure and recommendation dietary practices: The moderating effort of knowledge of nutrition, *The Journal of Consumer Affairs*, 27(1), 106-126.
- Naspetti, S. & Zanoli, R. (2002). Consumer motivations in the purchase of organic food: A means-end Approach, *British Food Journal*, 104(8), 643-653.
- National health survey. Overweight and Obesity in adults. Retrieved August 25, 2009, from <http://www.abs.gov.au/Ausstats/abs@.nsf/Latestproducts/4719.0>
- National health survey. Retrieved August 19, 2009, from <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4364.0>
- Newman. L.W. (2006). Social research methods, 6th edition, Pearson education, Inc. USA.
- Raine, K. D. (2005). Determinants of healthy eating in Canada: An overview and synthesis, *Canadian Journal of Public Health*, 96(8), 7.
- Swanson, L.A. (1996). 1.19850+ Billion Mouths to feed: Food linguistics and cross-cultural, cross-“national” food consumption habits in China, *British Food Journal*, 98(6), 33-44.
- Thomas, J. & Sheikh, N. (1994). Factors influencing food choice among ethnic minority adolescents, *Nutrition and Food Science*, 94(5), 29-35.

Visser, M. (1999). Food and culture: Interconnections, *Social Research*, 66(1), 117-131.

Weiss, S. & Zindler-Wernet, P. (1987). Health locus of control and preventive health behavior, *Western Journal of Nursing Research*, 160(9).

Williams, C. (2005). Consumer understanding and use of health claims for foods, *Nutrition Reviews*, 63(7), 256-259.