

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter attempts to review the relevant literature and research related to the antecedents that influence consumers' decision on function (healthy) food purchase. The chapter first discusses the definition of functional foods, then followed by consumer behavior on function (healthy) food. The second part is discusses on the theory of planned behavior. The third part is focus on the identification of antecedents of functional (healthy) food purchase.

2.2 Definitional Functional (Healthy) Foods

Functional (healthy) foods are foods that are enable to enhance health. These foods contain the necessary nutrients to provide energy, promote growth and other important bodily functions. For instance, orange juices that are fortified with calcium and butter spread with omega-3 oil added. These products are new variety of foods that are said able to improve physiological function of the human body (Diplock et al, 1999).

The surge of interest from consumer on the definition of functional (healthy) food, especially the interest in health enhancing role of specific foods or physiologically-active food components (Hasler, 1998), and as food that provides health benefits beyond basic nutrition (Hasler, CM, 2000). They provide a new approach to healthy eating by bridging a single component with a certain health effect in a product (Lahteenmark, 2003).

The reasons for the big amount of interest in this area in both the private and public sector (Hasler CM, 1996), is due to the health-conscious baby-boomers, self-care movement, expensive health care cost linked to chronic diseases, aging, advancing technology, nutritional genomics, change in food regulations, market opportunity, new scientific discovery, linking and food components to optimal health.

According to these definitions, fruits and vegetables are natural whole foods that can be classified as functional food. For instance, broccoli, carrots, tomatoes would be considered functional foods due to their rich sources of sulforaphane, beta carotene, and lycopene, respectively. Modified foods including those that are fortified with nutrients or added phytochemicals, are also classified as functional foods. With the strong interest on functional food, food biotechnology will continue to develop.

Several organizations are trying to define the term of functional (healthy) foods; however there is no one definition that can be universally accepted yet. Various definitions has been used by different organizations, for instance; according to FUFOSE (The European Commission Concerted Action on Functional (Healthy) Food Science in Europe, coordinated by the International Life Sciences Institute (ILSI Europe), a functional (healthy) food is satisfactorily demonstrated to affect beneficially one or more target functions in the body, beyond adequate nutritional effects, in a way that is relevant to either improved stage of health and well-being and/or reduction of

risk of disease. A functional (healthy) food must remain food and it must demonstrate its effects in amounts that can normally be expected to be consumed in the diet: it is not a pill or a capsule, but part of the normal food pattern (Diplock et al 1999).

IFT (Institute of Food Technologists) define foods and food components that provide a health benefit beyond basic nutrition (for the intended population), including conventional foods, fortified, enriched or enhanced foods, and dietary supplements. They provide essential nutrients often beyond quantities necessary for normal maintenance, growth, and development, and/or other biologically active components that impart health benefits or desirable physiological effects (IFT 2005).

According to ADA (American Dietetic Association) define that functional foods that include whole foods and fortified, enriched, or enhanced foods have a potentially beneficial effect on health when consumed as part of a varied diet on a regular basis, at effective levels. (ADA 2009) and IFIC foundation (International Food Information Council) define functional (healthy) foods as foods include a wide variety of foods and food components believed to improve overall and well-being, reduce the risk of specific diseases, or minimize the effects of other health concerns. For example, these can include the inherently healthful components in fruit and vegetables; whole grains and fiber in certain breads and cereals and calcium in milk; fortified foods and beverages, such as vitamin D fortified milk; and, in its broadest definition, functional foods can also include dietary supplements. (IFIC 2009)

Functional Foods for the Australian industry define the Functional (healthy) foods include 'minimally and substantially transformed foods containing known bioactive and 'substantially and elaborately transformed' food products, beverages or food ingredients containing known or added bioactivities. Any food promoted on health platform, where the health benefits are supported by good scientific evidence, is a functional food (Functional Foods for the Australian industry 2005).

The Health Canada define the functional (healthy) food is similar in appearance to, or may be, a conventional food, which is consumed as part of a usual diet and is demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions (Health Canada 1998).

Food and Nutrition Board of the National Academy of Science (US) define functional (healthy) foods as potentially healthful products that may include any modified food or food ingredient that may provide a health benefit beyond the traditional nutrients it contains" (Food and Nutrition Board 1994).

2.3 Consumer behavior on functional (healthy) foods products

Consumer needs or preference for particular products vary between individuals, segment groups and cultures (Ngapo, Martin, & Dransfield, 2007; Nielsen, Bech-Larsen, & Grunert 1998; Prescott & Bell, 1995). Although

Jeager, Andani, Wakeling, & MacFie, (1998) suggest that differences among individuals are dependent on the products. Due to the differences, this has encouraged organizations to learn more about local preferences prior to taking a wider distribution to reduce cost adapting to new products and new segments especially in the international markets. (Van Kleef, Van Trijp, & Luning 2005).

It is also important to identify the differences in preferences and motivation to consume products across segments in the local market. For instance, identifying the general differences in preferences of the younger and elderly consumers (Olsen, 2003). A meta-analysis by (Borah-Giddens and Falciglia, 1993) reported a significant but small correlation between parental food preferences and their children's food preferences. This shows that disagreements on preference are common in family food preferences and choices among parents and children. (Story, Neumark-Sztainer, & French, 2002).

Besides identifying how well their product is evaluated among consumers of different segments and cultures, business and marketing managers are also looking for explanation on why consumers choose to consume or not to consume their product, wanting to identify the motivation for buying and consuming, and any other barriers that may exist. They are well aware that product quality or perceived value is usually not the reason for buying and consuming, consumer's attitude and motivation to consume has various complex factors. For these reasons, product evaluation is put into a

more extensive theoretical framework that includes individual, motivational variables, external, social aspects and aspects of product (Grunert, 2002; Shepherd, 1989).

Ajzen's Theory of Planned Behavior is the most widely used theory in researches studying food attitudes and behavior (Mahon, Cowan, & McCarthy, 2006; Poverty, Wellens, & Conner, 2001; Verbeke & Vackier, 2005). This theory is well known for its ability to generalize across condition, behavior, objects, individual and cultural settings (Armitage & Conner, 2001). However this theory has not been used to explain intention to purchase product. Using this theory on a cross-cultural study could extend to the very few cross-cultural studies of this theory on the same field (Malhotra & McCort 2001).

Various theoretical and methodological approaches are suggested in order to increase the reliability, validity and predictability of results from consumer test of new products (Van Kleef et al., 2005). Despite Meiselman's (1992) suggestion for studies to be done in real dining situation with real food to be tasted by subjects, few studies has been conducted according to his advice. Cardello, Schutz, Snow, & Leshner, 2000; de Graaf et al., 2005; Hersleth, Ueland, Allain, & Naes, 2005). Measurement issues are important in consumer studies and research encourages multiple measure of latent constructs (Churchill, 1979). International marketing research has targeted on establishing equivalence of scales and measurement in data obtained from various cultures (Malhotra, 2001). Instrument invariance to be satisfied is

necessary for comparison to be valid and meaningful across groups and cultures. (Steenkamp & Baumgartner, 1998). These issues are also of growing importance in the area of food attitude and choice (Eertmans, Victor, Notelaers, Vansant, Vand den Bergh, 2006).

The purpose of this study is to use this study test the perceived differences in attitudes, norms, perceived behavioral control (barriers) and intention to purchase and lead to purchase the functional (healthy) foods at the Malaysia market from the theory of planner behavioral. This allow marketer to closing the information gap between functional (healthy) foods, consumers' attitude and purchase decision towards functional (healthy) foods.

2.3.1 Theory of Planned Behavior

Most researchers apply the theory of reasoned action and theory of planned behavior in **Figure 2.1** to explain the individual and environment in order to explain and predict the purchase behavior. (e.g., Bredhl & Grunert, 1997; Conner, Martin, Silverdale, & Gorgan, 1996; Denssion & Shepherd, 1995; Sparks, Conner, James, Shepherd, & Povey, 2001; Verbeke & Vackier, 2005). The important aspect of the theory is the immediate antecedent of any behavior is intention to perform the purchase behavior in question. The stronger the person's intention, the more likely the behavior will be performed. Intention is predicted by attitudes toward purchase product, social or normative factors such as expectations from the family and perceived

behavioral control. The structure of the model that will be tested in this study is presented in **Figure 3.1**

Intention is defined as how much are people willing to purchase, how much effort will be put into planning to perform the behavior (Azjen, 1991). Intention is assumed to capture the motivational factors that influence human behavior within various models in psychology and food science (Eagly & Chaiken, 1993; Saba & Vassallo, 2002). It is also used to predict customer loyalty (Fornell, 1992). This is because various meta-analyses and individual studies suggest that there is a high correlation between intention, future behavior purchase (Armitage & Conner, 2001) and past behavior (Ouellette & Wood, 1998). For instance, it was reported by Saba & Messina (2003) that intention to purchase organic fruit and vegetable and the relevant behavior was 0.70.

Intention to purchase and lead to purchase is said to be an important indicator to estimate potential demand for a new product (Lilien & Kotler, 1983) and frequently used in research on food products of purchase (e.g., Carneiro et al., 2005). Intention as a behavior indicator in the theory of planned behavior is also used when hypothetical products are purchased. For instance, intention was used as a dependent variable when Saba and Vassallo (2002) studied consumer's attitude towards gene technology in tomato production in Italy. Intention to purchase was used as the dependent variable and not assessment of buying behavior. This study defines and measures intention as

a general and large construct including planning, expecting, willingness to purchase and finally the lead to purchase. (Azjen, 1991).

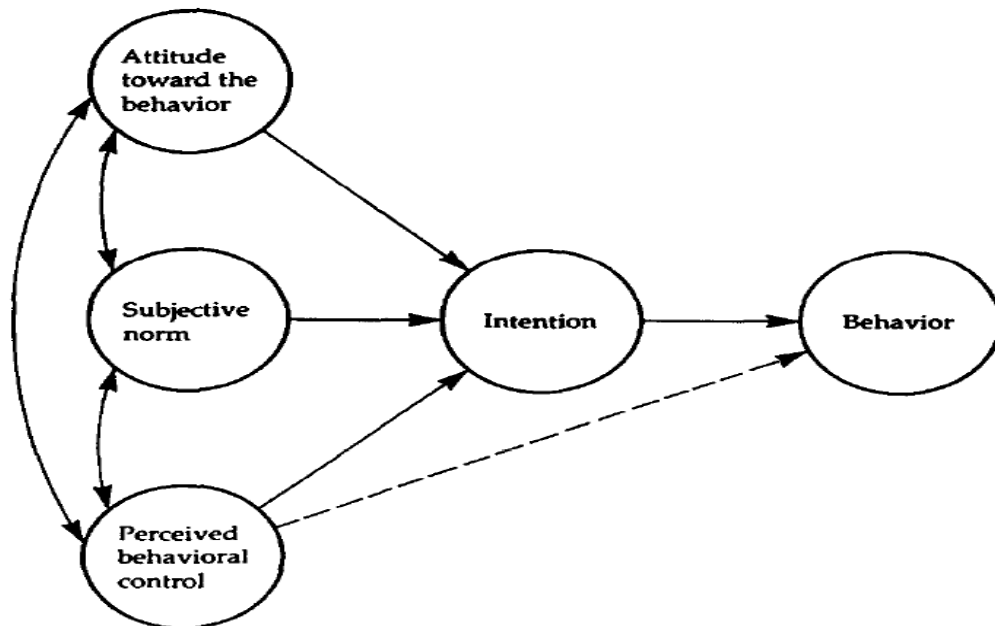


Figure 2.1 Theory of Planned Behavior

2.4 Antecedents of functional (healthy) foods

2.4.1 Consumer's attitude

Attitude is defined as the properties assigned to it in theoretical formulations. In formal terms, an attitude is defined as psychological tendency that is expressed by evaluating a particular entity or object with some degree of liking or disliking (Eagly & Chaiken, 1993). Various studies have argued that differences can be made between an evaluation made on affective responses (feeling, moods or emotions), an evaluation based on cognitive responses

(beliefs, thoughts or rationale arguments), and a general global evaluation of attitude (e.g., Crites, Fabrigar, & Petty, 1994). Azjen (1998) argues that on a general level, single factor is found to account for variance in attitude responses. The correlation among measures of cognition and affect, despite having room for unique variance, are considered magnitude as global measures. The study defines attitude as an association in memory between a given object and summary evaluation of the object (Fazio, 1995). The authors use items covering both cognitive and affective aspects of attitude in order to improve the validity of global measures of acquired food attitude.

Studies using the Theory of Planned Behavior confirm attitude as the most important predictor for intention (Armitage & Conner, 2001; Eagly & Chaiken, 1993; Godin & Kok, 1996). The studies propose that consumer's own attitude has been found to be more important than perceived social pressure or perceived behavioral control. Lobb, Mazzocchi, & Traill, 2007; Mahon et al., 2006; Shepherd & Sparks, 1994; Sparks). This is also suggested in studies of adolescents and young adults (e.g., Kassem, Lee, Modeste, & Johnston, 2003).

2.4.2 Consumer's subjective norm

To date, most research on the role of norms in attitude-behavior relations has been conducted from the perspective of the theories of reasoned action (Fishbein & Ajzen, 1975) or planned behavior (Ajzen, 1991). Social norms in these studies are intended to measure the influence of social environment,

and often operationalized as perceived social pressure or expectations from people in general or from specific groups or individuals. Parents and mothers in particular, seem to be most influential concerning children's food attitudes, choice and healthy eating behavior (Story et al., 2002).

Research found weak support for proposed role of subjective norms under the conditions mentioned by these theories. For instance, Azjen (1991) reviewed 19 test of the theory of planned behavior and found that in more than half of these the norm-intention link was non-significant. Azjen (1991) concluded that personal factors are more influential in the prediction of intention and behavior than social factors. Several recent meta-analysis (Armitage & Conner, 2001; Godin & Kok; Van den Putte, 1991) have supported Azjen 's (1991) findings and argued that subjective norm, in the way it is used in these models, is a poor predictor of intention and behavior.

Many explanations for the weak support of the norm-intention relationship has been highlighted, such as use of single items measure, the use of combination measures like subjective norm and motivation to comply, or vague group measure such as people important to me (Armitage & Conner, 2001). A second group of studies have reported that people differ in the degree to which they are under attitudinal or normative control (see Trafimow, 2000 for review). A third group of studies postulate that social norms are very dependent on the situation or behavior investigated (Trafimow, 2000).

Conflicting results has been produced in the area of food intention and behavior. For instance, Povey et al. (2001) found that social (subjective) norm had significant impact on intention to eat meat and vegan, but not vegetarian food in a study of a convenience sample in UK. Some other studies have also confirms a non –significant relationship between social norm and intention to consume food (e.g., Mahon et al., 2006).In a study conducting among adolescence’s diet, , Conner et al. (1996) found that social norm explained more of the variance of intention to diet that the attitude construct. Rogers, Brug, van Assema, and Dagnelie (2004) found that social norm was significant predictor of intention to consume fruit and vegetables among children in the Natherlands. The few studies we are aware of studying social norm in relation to seafood consumption behavior suggest more consistent results. Bredhal and Grunert (1997) found that, in Danish household, family expectations explained as much of the variance in both fresh and frozen seafood consumption as the attitude factors (taste and/or preferences). These results are similar to those found in a representative sample of Norwegian households by Olsen (2001), and by Verbeke and Vackier (2005) in Belgium.

2.4.3 Consumer’s perceived behavioural control

Past research shows that behavior are more likely to occur when people have both the stability and motivation to perform the behaviors that when they have only one or nothing (Eagly & Chaicken, 1993). Due to problem with identifying and measuring actual resources and opportunities, Azjen (1991) perceived behavioral control has been the main focus to access person’s belief on how

easy or difficult performance of the behavior was like to be. As an individual perceive on more resources and opportunities, the fewer obstacles they anticipate, the more control they have over their behavior.

Azjen (1991) ,suggested that control factors may either be internal to the person (e.g., skills, abilities, power of will, compulsion) or external to the person (e.g., time, opportunity, dependence on others). This multidimensional view has lead to several disagreement concerning the perceived behavioral control construct and to several controversies concerning the perceived behavior control construct and its distinction from other control constructs like self-efficacy or locus of control (Corner & Armitage, 1998). We define perceived behavioral control as an integrated measure of internal and external resources and contextual factors which make it difficult to perform the subject's motivation to consume the product under investigation.

Various studies have confirmed the Theory of Planned Behavior and the fact that inclusion of perceived behavioral control construct improved the earlier model's ability to predict intention and behavior (Azjen, 1991; Notani, 1998). Higher perceived behavioral control over positively evaluated behavior will usually have a higher correlation with stronger intention to perform the behavior. Azjen (1991) reported that in 16 test of link between perceived behavioral control and intention, all found significant links (even after controlling for the effects of attitudes and subjective norms). Van den Putte (1991) reported that perceived behavioral control explained an additional 14 % of the variance in intention and 4% in behavior (over and above attitude and

subjective norm). Notatni (1998) found in his meta-analysis that the perceived behavioral control-intention relationship was significant in 42 out of 51 studies (82.4%).

Perceived behavioral control has been proved to influence intention to consume several forms of foods products (Povey et al., 2001; Saba & Vassalo, 2002), including intention to purchase or loyalty toward fish or seafood (Olsen, 2007; Verbeke & Vackier, 2005). For instance, perceived behavioral control was the most influential predictor of intention to consume vegetables among children in the Natherlands. However, Moham et. al. (2006) did not find any significant relationship between perceived control and intention to consume ready meals by British consumers.

2.5 Chapter Summary

This chapter has reviewed all the relevant theoretical literature used in the study of examining antecedents of functional (healthy) food purchase include reviews of Theory of Planned Behavior. This reviews led to the development of conceptual framework. The following chapter discusses the hypotheses development and measurement development based on the proposed conceptual model.