Research Article

Moderating effects of media towards repurchasing functional food

Journal of Tourism, Hospitality & Culinary Arts (JTHCA)
2022, Vol. 14 (3) pp 74-89

Submit date: 30th September 2022
Accept date: 23rd November 2022
Publish date: 30th December 2022

Mohamad Luqman Mohamad Idris
Tunku Abdul Rahman University College (TARUC), Perak Branch Campus

Chemah Tamby Chik*
Faculty of Hotel & Tourism Management, Universiti Teknologi MARA Selangor
chemah@uitm.edu.my

Nurul Farah Sharini Hazman Wong
Tunku Abdul Rahman University College (TARUC), Perak Branch Campus

Abdul Rais Abdul Rahman
Fakulti Perikanan & Sains Makanan, Universiti Malaysia Terengganu

Aslinda Mohd Shahril
Sabaianah Bachok
Faculty of Hotel & Tourism Management, Universiti Teknologi MARA Selangor

Proposed citation:

Mohamad Idris, M.L., Tamby Chik, C., Hazman Wong, N.F.S., Abdul Rais, A.R., Shahril, A.M. & Bachok, S. (2022). Moderating effects of media towards repurchasing functional food. *Journal of Tourism, Hospitality & Culinary Arts*, 14(3), 74-89.

Abstract

This study aims to assess how functional food attributes and media marketing influence consumers' repeat purchases. Functional food attributes include perceived value, necessity, confidence and safety while media marketing as moderating factor was studied through 2 dimensions which are communication and the internet. Survey questionnaires were distributed to 384 respondents in Petaling Jaya, Selangor, which is located approximately 10 km west of Kuala Lumpur, the capital of Malaysia. The data were analysed using Pearson correlation and linear regression. The results indicated that a significant relationship existed between functional food attributes and consumers' repeat purchases. Media marketing was found to have a strong moderating role in the relationship between functional food attributes and consumers' repeat purchases. Thus, a proper understanding of media marketing will enable manufacturers to develop better strategies for boosting sales and retaining frequent consumers.

Academically, the results could improve the knowledge on functional food users and the method they acquire knowledge on functional food.

Keywords:

Functional food, consumption, media marketing, repeat purchases

1 Introduction

1.1 Background

In today's society, health has become an increasingly important concern in the consumption of functional foods (Goetzke, Nitzko, and Spiller, 2014). Scientific evidence and a growing awareness of the correlation between diet and health, coupled with sedentary lifestyles and an ageing population, have driven interest in healthier food products (Malla, Hobbs and Sogah, 2013). Chen (2011) reported that several factors increase the willingness of consumers to buy functional foods, including their awareness of diet-related health problems, degree of their busy schedule, the convenience of the food choices and whether they exercise regularly. These products include functional foods and natural health products (nutraceuticals or dietary supplements) that offer positive benefits to consumers (Hobbs, Malla, and Sogah, 2014).Functional foods can be defined as foods that bring science and technology into everyday life and contain physiological benefits that can potentially cure various non-communicable diseases (Niva, 2007; Shadidi, 2009). Scholars contend that it is important to clarify that functional foods are not related to any kind of medicine, such as pills or capsules (Grajek, Olejnik, and Sip, 2005; Diplock et al. 1999).

Based on the General Accounting Office, USA (2000), functional foods are products that contain naturally occurring chemicals that can be found in fruits, vegetables, grains, herbs, and spices. These products can offer health benefits, lower the risk of some diseases, or affect a particular body process. This has been proven for diseases caused by nutritional deficiencies, such as pellagra and scurvy. Health Canada (2006) reported that functional foods are conventional foods that are part of a regular diet and have proven health-related benefits as well as the ability to reduce the risk of certain chronic diseases. As an example, functional foods are designed to lower the risk of lung cancer by removing certain ingredients, adding or combining ingredients that normally cannot be found in a food product, or by concentrating substances in higher than normal quantities. Therefore, functional foods are good at providing health benefits to consumers.

It can be very challenging for food companies to promote newly developed products in the market and gain customer acceptance (Gilbert, 2000; Urala and Lahteenmaki, 2007. Therefore, it is crucial that the product information be communicated honestly to the targeted consumer segment using the appropriate

marketing medium. Sun-Waterhouse et al. (2008) posited that the perception of an individual's health status and nutritional knowledge would affect their healthy eating attitudes, as well as functional food consumption. Factors known to influence consumer decisions include health benefits, taste, convenience of use, and price (Urala and Lahteenmaki, 2007; Verbeke, 2005; Gray, 2003).

In Malaysia, rapid economic growth has led to modern living and the emergence of various health issues, such as cancer, heart disease, diabetes, and obesity (Ministry of Health, 2016). Cultural values, personal values, knowledge, and physical or spiritual health are common factors known to influence functional food consumption among Malaysians (Hasnah Hassan, 2011a; Hasnah Hassan 2011b). This has resulted in a demand for functional foods, as many Malaysians are becoming more health-conscious (Lau et al., 2012; Stanton, Emms and Sia, 2011). It is more so with the emergence of many new viruses and diseases, having a well-protected immune system were proven beneficial with regular consumption of functional food.

Food companies are now exploring various media to market their products and retain more loyal customers (Askegaard et al.2006; L'abbe et al., 2008; Moller Jensen and Hansen; 2006). As contended by Salleh et al. (2015), empirical studies on the intention to repurchase functional food as well as the role of media marketing, particularly in the Malaysian context, have yet to be explored extensively. Therefore, this study aims to measure how functional food attributes contribute to consumers' intentions to repurchase through the moderation of media marketing.

2 Literature Review

2.1 Factors influencing the repurchasing of functional foods

Functional food ingredients, health benefits, and consumers' perceived value are known to affect the acceptance of and willingness to purchase certain types of products (Frewer, Scholderer, and Lambert, 2003; Lahteenmaki, 2003). Once consumers can accept a product due to the health benefits offered, they will feel confident about buying them again (Verbeke, 2005; Hailu et al, 2009). It is advocated that gaining consumer trust in a food product will increase their chances of repurchasing the food (Urala and Lahteenmaki, 2003; Siegrist, 2008).

Thus, it is crucial to discover the factors that influence consumers' willingness to buy functional foods, as every individual may have differences in the extent to which people are likely to buy these products (Siegrist et al., 2008; Frewer, Scholderer, & Lambert, 2003). In fact, the emergence of functional foods could benefit consumers' diets as well as potentially create new business opportunities for producers (Niva, 2007). Primary health concerns, consumers' familiarity with functional food products, the nature of the carrier products, and the communication mode of health effects are

among the major factors that lead to individual acceptance of functional food products (Annunziata & Vecchio, 2011; Siro et al., 2008; Verbeke, 2005).

Moller Jensen and Hansen (2006) reported that the effect of consumers' attitudinal loyalty towards actual repeat purchases can come in two different ways. First, attitudinal loyalty can be referred to as a stronger brand preference that reduces the variety-seeking tendency of consumers in trying other products. Second, when the preferred brand or product is out-of-stock, attitudinal loyalty will enhance consumer resistance to purchase and consume alternatives in tempting situations.

Ji Song and Wood (2007) contented that repeat purchases are caused by consumer habits. This is where, once the habit is formed, repeat patronization is triggered automatically by contextual cues. Therefore, consumers with strong habits will maintain a strong inclination to repeat purchases even when attitudinal evaluation or loyalty has changed, as long as the contextual cues that trigger habitual repeat purchases remain. Therefore, other factors have the potential to improve the quantity of functional food that consumers purchase.

2.2 Media marketing

For the past decade, functional foods have become an emerging trend due to higher consumer demand for food products with health benefits (L'abbe et al., 2008). As functional food manufacturers actively advertise their products on all media platforms, awareness and interest are created among people concerning the potential health benefits of such products (L'abbe et al., 2008). A proper understanding of utilitarian, value-expressed, ego-defensive, and knowledge functions allows the marketer to enhance benefits connected to a specific type of attitude while shaping the marketing communication strategy for the product (Askegaard et al., 2006).

In addition, food marketers need to come out with creative ideas to attract consumers more frequently by using media and other promotional tools (Business Wire, 2009). It is crucial that marketers understand how consumers access information on the internet through various means of technology (Luck & Mathews, 2010). More food companies are now using more than one means of marketing in addition to traditional word of mouth to reach a wider segment of consumers. Active communication marketing through the internet enables consumers to choose which functional food products are the most suitable for them based on the design, nutrition labelling, advertisement approach, and lifestyle-specific health benefits (Chaffey et al.2006).

Gilsenan (2011) highlighted that the benefits of functional foods should be linked to consumers. If food companies are not allowed to highlight the health benefits of functional foods, consumers may not understand the reason why they pay a premium for food products with certain ingredients (Hailu et al, 2009). The definition for functional food spanned from non-traditional ingredients, fortified, enriched, providing health benefits until providing optimal health and well-being (Kim & Adhikari, 2020).

It is also important that functional foods have proper dosage prescriptions before being introduced to the market. Some nutraceutical plant extracts, such as bearberry, can cause potential health risks during prolonged use (Dkyes, Amarowicz, and Pegg, 2003). Therefore, it is crucial for food manufacturers to clearly state information such as recommended dosage, the ideal time period for consumption, and when to avoid consuming functional foods with another type of food that can diminish the full nutrition benefits (Landstrom, Hursti and Magnusson 2009; Niva, 2007).

2.3 Hypotheses

Upon reviewing the relevant literatures, the dependent variable of this study is consumers' repurchase intention and the independent variable is functional food attributes which is represented through perceived value, necessity, confidence, and safety. Meanwhile, media marketing functions as the sole moderating variable. Figure 1 illustrates the proposed framework which aims to test and verify the following 2 hypotheses:

H1: There was a significant relationship between functional foods attributes and consumers repeat purchase.

H2: There was a moderating effect of media marketing towards the consumers' repeat purchase of functional foods.

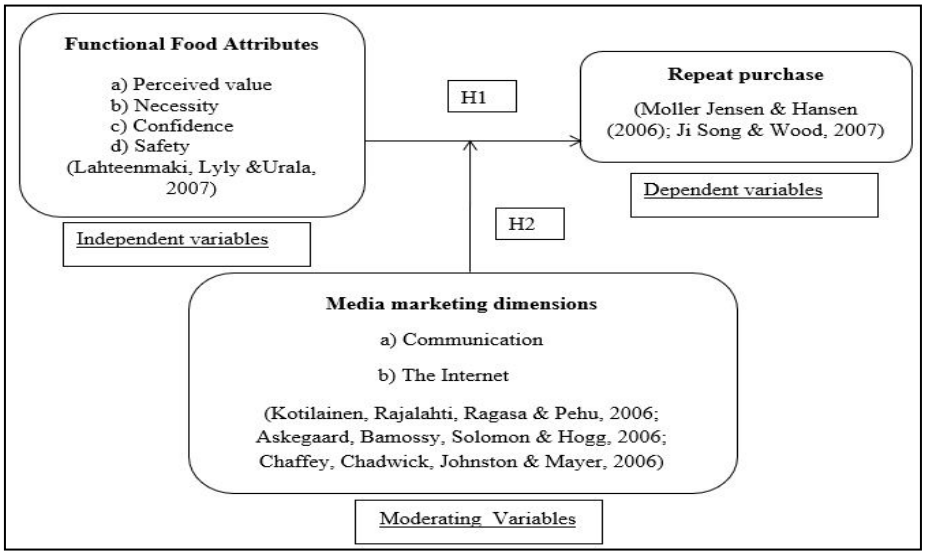

Figure 1.1: Study / Conceptual Framework

3 Methodology

3.1 Study design

A quantitative cross-sectional approach was adopted for this study, and the data were obtained through structured questionnaires. The sample population was selected through convenience sampling. According to Kredgie & Morgan (1970), population of more than 1 million people require samples of 384 in numbers. Thus, In total, 384 people within the district of Petaling Jaya, located approximately 10 km west of Kuala Lumpur, participated in this study. The survey was administered upon obtaining research ethics approval from the Universiti Teknologi MARA. Respondents were approached for survey purposes at gyms, shopping malls, and beauty shops located within the Petaling Jaya downtown area. According to Chen (2011), consumers who buys functional food are those who are aware of diet-related problems, busy and who exercises thus, data were collected at these locations to engage with potential consumers. Petaling Jaya was chosen due to its urban setting and located not far from Malaysia capital city. Information about the study was explained in written and verbal form. Those who agreed to participate were invited to fill out a consent form before beginning the survey.

3.2 Questionnaire structure

The questionnaire was constructed with 4 major sections. Section A was designed using a nominal scale and focusing on the respondent's demographic information, which includes gender, education level, age, ethnicity, functional food consumption, and functional food categories. Section B consists of 34 items relating to functional food attributes and consists of four dimensions: perceived value, necessity, confidence, and safety. Section C is used to measure media marketing through two dimensions (Communication and the Internet) as the moderating variable through 14 items. Last, section D consists of 5 items that measure repeat purchase as the dependent variable. Items in section B through D were adapted from past research relating to functional food attributes (Bech-Larsen and Grunert, 2003; Urala and Lahteenmaki, 2003; Hasler and Brown, 2009, Goetzke, Nitzko and Spiller, 2014, Malla et al., 2013, Hobbs, Malla and Sogah, 2014; O'Connor and White, 2010; Urala and Lahteenmaki, 2007) media marketing (Kotilainen et al., 2006; Askegaard et al., 2006; Chaffey et al., 2006; Luck and Mathews, 2010; L'abbe, 2008) and repeat purchase (Moller Jensen and Hensen, 2006; Ji Song and Wood, 2007; Ryu and Han, 2012). Respondents were asked to rate all items in sections B through D using a 5-point interval scale (1= strongly disagree, 5= strongly agree). A pilot study was initially conducted among 30 Foodservice Management postgraduate students at the Universiti Teknologi MARA to verify and confirm the reliability and validity of the items used. Alpha values were above .8 (perceived value = .955, necessity = .941, confidence = .863, safety = .863, communication = .939, the

internet = .921, repeat purchase = .932), and all were well above the minimum threshold of .60 suggested by major scholars (Creswell, 2009; Hair et al., 2010).

3.3 Data collection and sampling

Data were collected in Petaling Jaya, Malaysia. The district was chosen based on its location which is urban and located about 10 km away from capital city Kuala Lumpur. There are no available statistic on the number of consumers for functional food thus sampling frame could not be determined. Convenience sampling were used to collect data at several gymnasium, malls and beauty spa. Three hundred and eighty four responses were collected. However, due to non-consumers of functional food were quite large in this study (n=124), there were omitted from further statistical analysis. According to Roscoe (1975), sample size between 30 to 500 would deem sufficient for behavioural study.

3.4 Data analysis

The data collected were analysed using the Statistical Package for Social Science (SPSS) 22.0. The analysis involves a frequency test of descriptive statistics (mean and standard deviation), correlation, and linear regression. Similar to the pilot study, internal reliability for the actual survey was recorded by Cronbach's alpha values above the minimal threshold (perceived value = .991, necessity = .940, confidence = .981, safety = .941, communication = .968, the internet = .973, repeat purchase = .970). Only data from respondents whom consumed functional food being were deemed usable for statistical analysis.

4 Findings

4.1 Respondent profile

The respondent profiles of functional food consumers are compiled in Table 1 and consist of 6 demographic categories: gender, educational background, age group, ethnicity, frequency of consumption, and types of functional food consumed. The profiles were based on the 384 respondents who participated however, they were omitted for further discussion due to nonconsumption of functional food.

Table 1: Respondent Profile (n=384)

	Frequency (*n*)	**Percentage *(%)***
Gender		
Male	216	56.3%
Female	168	43.8%
Education Background		
High School Graduate	48	12.5%
Diploma	103	26.8%
Bachelor Degree	163	42.4%
Masters	53	13.8%
PhD	17	4.4%
Age group		
18 – 29 years old	211	54.9%
30 – 49 years old	123	32.0%
50 – 64 years old	38	9.9%
65 years old and above	12	3.1%
Ethnicity		
Malay	210	54.7%
Chinese	104	27.1%
Indian	56	14.6%
Others	14	3.6%
Frequency of consuming functional food		
Often	167	43.5%
Seldom	92	24.0%
Never	124	32.6%

4.2 Descriptive statistics

The mean scores and standard deviation for items related to functional food attributes, media marketing, and repeat purchases are compiled in Tables 2, 3, and 4, respectively. The mean scores for media marketing (3.62-3.86) and repeat purchases (3.72-3.76) were above 3.60, indicating that the respondents indeed favoured the items in these sections. For functional food attributes, items recorded mean scores below 3.00. However, these items were related to negative perception towards functional foods (Items 12, 13, 14, 15, 17, 18, 19, 20, and 21).

Table 2: Means and Standard Deviation for functional food attributes (n=259)

	ITEM	M	SD
	Section B: Functional food attributes		
1	Functional foods help to improve my mood	3.79	1.313
2	My performance improves when I eat functional foods	3.78	1.297
3	Functional foods make me easier to follow a healthy	3.76	1.318
4	lifestyle	3.73	1.322
5	The idea that I can take care of my health by eating functional foods gives me pleasure	3.70	1.335
6	Functional foods can repair the damage caused by an unhealthy diet	3.70	1.383
7	I am prepared to compromise on the taste of a food if the product is functional	3.82	1.419
8	I actively seek out information about functional foods	3.84	1.440
9	I am functional foods consumers	3.79	1.410
10	I eat functional foods for healthy	3.72	1.384
11	I eat functional foods for beauty	3.79	1.394
12	I eat functional foods to prevent disease	2.61	1.095
13	Functional foods are completely unnecessary	2.65	1.122
14	Functional foods are a total sham	2.64	1.125
15	The growing number of functional foods on the market is a bad trend for the future	2.66	1.147
16	For a healthy person it is worthless to use functional foods	3.14	1.258
17	It is great that modern technology allows the	2.70	1.248
18	development of functional foods	2.70	1.283
19	I only want to eat foods that do not have any medicine-like effects	2.76	1.350
20	Health effects are not appropriate in delicacies	2.67	1.318
21	Functional foods are consumed mostly by people who	2.63	1.325
22	have no need for them	3.45	1.073
23	It is pointless to add health effects to otherwise	3.50	1.110
24	unhealthy foods		
	For me functional foods are useless	3.52	1.176
25	Functional foods promote my well-being	3.56	1.238
26	The safety of functional foods has been very	3.59	1.265
27	thoroughly studied	3.59	1.285
28	One can get reliable information about the health effects of functional foods	3.57	1.277
29	Functional foods information is given about health effects	3.57	1.281
30	Functional foods are science-based top products	3.53	1.427
31	I trust the information given about health effects		
	I do not believe that the stated health effects are based	3.54	1.417
32	on functional foods study	3.44	1.339
33	In my opinion, nutrition experts do not know the health	3.50	1.346
34	effects of functional foods	3.43	1.364

	If used in excess, functional foods can be harmful to health		
	In some cases functional foods may be harmful for a healthy people		
	Using functional foods is completely safe		
	The new properties of functional foods carry unforeseen risks		
	Exaggerated information is given about health effects		

Table 3: Means and Standard Deviation for media marketing (n=259)

	ITEM	M	SD
	Section C: Media marketing		
1	Functional foods products should be more creative to capture my attention	3.75	1.177
2	Word of mouth advertising is very important to reach	3.84	1.226
3	consumers	3.75	1.234
	Media use of body language that can visualize pictures		
4	and action to accept the functional foods	3.65	1.227
5	I use family events as ways to communicate with the consumers	3.60	1.233
6	I use gatherings as ways to communicate with functional foods consumers	3.62	1.239
7	Company use electronic media to communicate with	3.64	1.246
8	functional foods consumers	3.82	1.187
9	Company use electronic media to promote the	3.86	1.197
10	functional foods	3.79	1.225
11	I expect an internet experience to be more interactive	3.77	1.223
12	I raised in a world of technology	3.71	1.265
	I raised in a world of instant gratification		
13	Surfing the internet allow me to connect with peers	3.74	1.277
	Surfing the internet allow me to discuss with my		
14	colleagues about functional foods	3.74	1.287
	The internet give me opportunities to interact with friends using the social networking such as Facebook and Twitter		
	Functional foods consumers can be reach digitally through websites		

Table 4: Means and Standard Deviation for repeat purchase (n=259)

	ITEM	M	SD
	Section D: Repeat purchase		
1	Attitudinal loyalty, allow me to refers to stronger brand preference of functional foods	3.76	1.291
2	Repeat purchase, allow me to refers to a stronger brand preference of functional foods	3.76	1.323
3		3.72	1.334

4	Repeat purchase is caused by consumer habit of functional foods	3.72	1.311
5	The consumers with strong habits repeat their purchase of functional foods Loyalty consumers will repeat their purchase of functional foods products	3.74	1.314

4.3 Relationship between functional food attributes and repeat purchases

Pearson correlation and linear regression were administered to measure the relationship between the functional food attributes and repeat purchases, as portrayed in Tables 5 and 6, respectively. The results clearly indicate that there was a significant relationship between the functional food attributes and the repeat purchase of functional foods. The findings echo past scholars (Salleh et al, 2015; Rezai et al. ,2012; Teng et al., 2012), advocating that functional foods with a number of good attributes would indeed encourage Malaysian consumers to repurchase them.

Table 5: Coefficients for independent variable and dependent variable, (n= 259)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.631	0.165		-9.868	0.000
	Functional Foods Attributes	1.590	0.048	0.861	33.124	0.000

Table 6: Model summary for independent variable and dependent variable, (n= 259)

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
Functional food attributes	0.861	0.742	0.741	0.632

4.4 Moderating Effect of Media Marketing

Correlation and linear regression were repeated to measure the moderating effect of media on functional food attributes and repeat purchases. The results are portrayed in Tables 7, 8, and 9. It was observed that media marketing has a moderating influence on consumers' repeat purchase of functional foods, as the R-square value increased from 0.742 (74.2%) to 0.820 (82%). This confirms the fact that media marketing is indeed significant as being a moderator between functional food attributes and repeat purchases. The results support the findings of past scholars on the importance of fully utilizing media marketing in communicating important product information, thus

increasing the chances of repeat purchases (Askegaard et al., 2006; Chaffey et al., 2006; Hailu et al, 2009; Landstrom, Hursti and Magnusson 2009).

Table 7: Result for Pearson Correlations, (n=259)

		Repeat Purchase	Functional Food Attributes	Media Marketing
Pearson Correlation	Repeat Purchase	0.803	0.933	1
	Functional foods attributes	1	0.785	0.803
	Media marketing	0.933	0.845	1.000
Sig. (2-tailed)	Repeat Purchase	0.000	0.000	
	Functional foods attributes		0.000.	0.000
	Media marketing	0.000		0.000

Table 8: Model summary for independent variable, moderating variable and dependent variable

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
Media marketing	0.905	0.820	0.819	0.52858

Table 9: Coefficients for independent variables, moderating variable and dependent variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.083	0.192		0.433	0.665
	Functional Foods Attributes	1.191	0.051	0.645	23.490	0.000
	Media marketing	-0.437	0.034	- 0.353	-12.856	0.000

5 Conclusion

A major contribution of this study is the inclusion of media marketing as a moderator between functional food attributes and repeat purchases. While functional food attributes were adequate to influence repeat purchases amongst Malaysian consumers,

it is worth highlighting that moderation through media marketing can have greater potential in boosting repeat purchases of functional food. Therefore, it is important that producers of functional food constantly explore new ways to market their products while not neglecting their responsibility to inform potential consumers about the suitability of their products and the correct dosage to obtain optimal health benefits.

Despite making contributions to the body of knowledge and producing significant findings and insights, there are a few limitations that could be improved upon. First, responses were only enough to represent the district of Petaling Jaya, Selangor. Therefore, replicating the study on a state or national level will enable a comparison of repeat purchases of functional food amongst consumers in different states. Second, repeat purchase of functional food was only measured through two constructs, namely, functional food attributes and media marketing. Many consumer behaviour studies have extensively explored the elements of perceived value, eating behaviour, and satisfaction to holistically understand the sequence of factors affecting repeat purchases. Therefore, future research on the repeat purchase of functional food can incorporate these dimensions to develop an in-depth understanding of consumers' post-purchase behaviour.

Overall, this study achieved its aim of providing a better understanding of the important factors that can influence the repeat purchase of functional foods within the context of Malaysian consumers. In addition, the moderating role of media marketing was empirically tested. That the results indicate that media marketing plays a strong moderating role enhances the value of the study.

6 Acknowledgement

Authors would like to thank Celebrity Fitness and Fitness One, Petaling Jaya for its cooperation in the data collection process.

7 References

Business Wire (2009). Colman Brohan Davis CEO Urges Companies to Re-Tool Marketing Strategies to Engage Gen Y Business Buyers. Retrieved August 8th,2011fromhttp://www.businesswire.com/news/home/20091029005060/en/ColmanBrohan-Davis-CEO-Urges-Companies-Re-tool

Askegaard, S., Bamossy, G., Salomon, M. R., Hogg, M. K. (2006).*Consumer Behavior: an European perspective 3rd edition*, England: Prentice Hall.

Bech-Larsen, T., & Grunert, K. G. (2003). The perceived healthiness of functional foods: A conjoint study of Danish, Finnish and American consumers' perception of functional foods. *Appetite*, 40(1), 9-14.

Chaffey, D., Ellis-Chadwick, F., Johnston, K. & Mayer, R. (2006). *Internet Marketing: Strategy, Implementation and Practice.* New Jersey: Pearson Education Limited

Chen, M.F. (2011). The joint moderating effect of health consciousness and helathy lifestyle on consumers' willingness to use functional foods in Taiwan. Appetite, 57,253-262.

Creswell, J. W. (2009). *Mapping the field of mixed methods research*. SAGE Publications: Los Angeles.

Diplock, A. T., Aggett, P. J., Ashwell, M., Bornet, F., Fern, E. B., and Roberfroid, M. B. (1999).Scientific concepts of functional foods in Europe.Consensus document.*The British Journal of Nutrition*, 81(6), 1–27.

Dykes, G. A., Amarowicz, R., and Pegg, R. B. (2003). An antioxidant bearberry (Arctostaphylosuva-ursi) extract modulates surface hydrophobicity of a wide range of food-related bacteria: implications for functional foods safety. *Food control*, 14(7), 515-518.

Frewer, L., Scholderer, J., & Lambert, N. (2003). Consumer acceptance of functional foodsss: issues for the future. *British Food Journal*, 105(10), 714-731.

Gilbert, L. (2000). Marketing functional foods: how to reach you target audience. *AgBioForum*, 3, 20–38.

Gilsenan, M. B. (2011). Nutrition & health claims in the European Union: A regulatory overview. *Trends in Food Science & Technology*, 22 (10), 536-542.

Grajek, W., Olejnik, A., & Sip, A. (2005). Probiotics, prebiotics and antioxidants as functional foods. *Acta Biochimica Polonica-English Edition*, 52(3) , 665-671.

Goetzke, B., Nitzko, S., & Spiller, A. (2014). Consumption of organic and functional foods. A matter of well-being and health? *Appetite*, 77, 96-105.

Gray, B. (2003). Framing of environmental disputes. In R. Lewicki, B. Gray, & M. Elliott (Eds.), *Making sense of intractable environmental conflicts: Concepts and cases* (11-34). Washington: Island Press.

Hailu, G., Boecker, A., Henson, S., and Cranfield, J. (2009).Consumer valuation of functional foods and nutraceuticals in Canada. A conjoint study using probiotics. *Appetite*, 52 (2), 257-265.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). Multivariate data analysis. Englewood Hill: Prentice Hall.

Hasler, C. M., & Brown, A. C. (2009). Position of the American Dietetic Association: functional foods. *Journal of the American Dietetic Association*,109 (4), 735-746.

Hasnah Hassan, S. (2011a). Consumption of functional food model for Malay Muslims in Malaysia. *Journal of Islamic Marketing*, 2(2) **,** 104-124.

Hasnah Hassan, S. (2011b). Managing conflicting values in functional food consumption: the Malaysian experience. *British Food Journal,* 113(8)**,** 1045-1059.

Hobbs, J. E., Malla, S., &Sogah, E. K. (2014).Regulatory frameworks for functional foodss and supplements. *Canadian Journal of Agricultural Economics/Revue canadienned'agroeconomie*, 62 (4), 569-594.

Ji Song, Mindy & Wendy Wood. (2007). "Purchase and Consumption Habits: Not Necessarily What You Intend". *Journal of Consumer Psychology*, 17(4), 261-276.

Kim, J. & Adhikari, K. (2020). Current Trends in Kombucha: Marketing Perspectives and the need for improved Sensory Research. Beverages, 6(15). Doi:10.3390/beverages6010015

Kotilainen, L., Rajalahti, R., Ragasa, C., & Pehu, E. (2006). *Health enhancing foods: Opportunities for strengthening the sector in developing countries*. The World Bank.

L'Abbé, M.R., Dumais, L., Chao, E., &Junkins, B. (2008), 'Health claims on foods in Canada'. *Journal of Nutrition, Supplement*, 138(6), 1221-1227.

Lähteenmäki, L. (2003). Consumers and functional foodsss.InT.Mattila-Sandholm& M. Saarela (Eds.), Functional dairy products. Woodhead Publication Ltd, Cambridge.

Landström, E., Hursti, U. K. K., & Magnusson, M. (2009). "Functional foodsss compensate for an unhealthy lifestyle". Some Swedish consumers' impressions and perceived need of functional foods. *Appetite*, 53 (1), 34-43.

Lau, T. C., Chan, M. W., Tan, H. P., & Kwek, C. L. (2012). Functional foods: a growing trend among the health conscious. *Asian Social Science*, 9 (1), 198-208.

Luck, E. M., & Mathews, S. W. (2010). A comparative study of marketing student engagement in online social networks and virtual worlds: Facebook versus second life. In Proceedings of 2010 Global Marketing Conference.

Malla, S., Hobbs, J. E., & Sogah, E. K. (2013). Functional foods and natural health products regulations in Canada and around the world: nutrition labels and health claims. *Saskatoon, Saskatchewan, Canada: Report prepared for the Canadian Agricultural Innovation and Regulation Network*, 447-454.

Mollet, B., and Rowland, I. (2002).Functional foods: at the frontier between food and pharma. *Current Opinion in Biotechnology*, 13(5), 483-485.

Møller Jensen, J., & Hansen, T. (2006). An empirical examination of brand loyalty. *Journal of Product & Brand Management*, 15 (7), 442-449.

Ministry of Health (2016). *National Plan of Action for Nutrition of Malaysia III 2016- 2025*. Putrajaya: National Coordinating Committee on Food and Nutrition (NCCFN)

Nesbary, D. (2000). The value of web directories in the classroom. *British Journal of Educational Technology*, 31(4), 371-373.

Niva, M., (2007). 'All foods affect health': understandings of functional foods and healthy eating among health-oriented Finns. *Appetite*, 48(3), 384-393.

O'Connor, E. L., & White, K. M. (2010). Willingness to trial functional foodsss and vitamin supplements: The role of attitudes, subjective norms, and dread of risks. *Food Quality and Preference*, 21(1), 75-81.

Rezai, G., Teng, P.K., Mohamed, Z., and Shamsudin, M.N (2012). Functional Food Knowledge and Perceptions among Young Consumers in Malaysia. *International Journal of Economics and Management Sciences*, 6(3), 28-33.

Ryu, K. and Han, H. (2010), Influence of the quality of food, service, and physical environment on customer satisfaction and behavioral intention in quick-casual restaurants: moderating role of perceived price, *Journal of Hospitality & Tourism Research*, 34 (3), 310-329.

Salleh, H. S., Noor, A. M., Mat, N. H. N., Yusof, Y., & Mohamed, W. N. (2015). Consumer-Behavioural Intention Towards The Consumption Of Functional Food In Malaysia: Their Profiles And Behaviours. *The International Business & Economics Research Journal* , 14(4), 725-734.

Stanton Emms, Sia. Malaysia's Market for Functional Foods, Nutraceuticals and Organic Foods. An Introduction for Canadian Producers and Exporters. 2011. Available from: http://www5. agr.gc.ca/resources/prod/Internet-Internet/MISB-DGSIM/ATSSEA/PDF/5842-eng.pd

Siegrist, M. (2008). Factors influencing public acceptance of innovative food technologies and products. *Trends in Food Science & Technology*, 19(11), 603-608.

Sun-Waterhouse, D., Farr, J., Wibisono, R., &Saleh, Z. (2008). Fruit-based functional foods I: production of food-grade apple fibre ingredients. *International Journal of Food Science & Technology*, 43(12), 2113-2122.

Teng, P.K., Rezai, G., Mohamed, Z. & Shamsudin, M. N. (2012). Malaysian Consumers' Willingness-to-pay for Functional Food. In Proceedings of 2nd International Conference on (ICM 2012), Kedah, Malaysia, June 11-12, 2012.

Urala, N., and Lahteenmaki, L. (2007). Consumers' changing attitudes towards functional foods. *Food Quality and Preference*, 18(1), 1–12.

Verbeke, W. (2005). Consumer acceptance of functional foods: Sociodemographic, cognitive and attitudinal determinants. Food Quality and Preference, 16(1), 45–57.