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Preference of Health Supplements among Malay Ethnic in Terengganu, Malaysia

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Abstract

These days, there is abundance of different health supplement brands and attributes available in the market to indulge customers. Hence, companies face challenges in understanding how to affect customers in their choice of health supplements. This paper investigated how associated factors such as brand image, product quality, product availability, and promotional activities of company affect the preference of health supplements among Malay ethnic in Terengganu, Malaysia. A comprehensive literature review was conducted to identify, evaluate and synthesize the relevant literature within the context of this study. This study used a non-probability quota sampling technique for respondents' gender to avoid biasness in study. While data were analysed using Statistical Package for Social Science (SPSS) to explain the significance of each associated factor towards customers' preference in health supplements.

Keywords: Preference, Health Supplements, Brand Image, Product, Quality, Malay, Terengganu.

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Introduction

The idea of being healthy can be championed through the consumption of healthy food. After all, healthy food is the best way human can obtain adequate nutrients requirement. However, the copiousness of healthy food choices available to customers does not mean that each choice offers suitable and sufficient nutrients essentially needed by different customers with diverse health conditions. Supplements do not replace healthy diet, but fittingly it can plug dietary gaps ("Should you get your nutrients," 2015). United States Food and Drug Administration (2015) proclaimed that dietary supplements contain vitamins, mineral, amino acids, herbs or other substances that can be used to complement the diet. In addition, Gale Encyclopedia of Medicine (2006) stated that nutritional supplements including vitamins, minerals, herbs, meal supplements, sports nutrition products, natural food supplements, and other related products can be added to the diet to boost overall human's health and energy.

Health or dietary supplements refer to a diverse group of products commonly consumed for the purpose of complementing the diet and enhancing health. These products typically contain ingredients from natural sources and are not meant to prevent, treat, cure or alleviate the symptoms

of medical diseases or conditions (“Health Supplements” 2017). Evidence does suggest that some dietary supplements can enhance health in different ways. The most popular health supplements are multivitamins, calcium and vitamins B, C and D. These supplements are available to customers without a prescription (NIH, 2013) and come in dosage forms such as pills or tablets, capsules, soft gels, powders, energy bars or liquids.

In Malaysia, the upper-middle and higher income consumer segments are generally more educated and have a tendency to take charge of their own health. To them, an ounce of prevention is worth a pound a cure. As a result, nutritional and food supplements are seen as a means to maintain and increase overall wellbeing (“Malaysia - Nutritional and Food Supplements” 2018). In addition, Malaysian Adult Nutrition Survey in 2014 indicated that about one third of Malaysian adults take variety of dietary supplements (Mohd Zaki, Rasidi, Awaluddin, Hiong, Ismail & Mohamad Nor, 2018). This implies that the total numbers of consumers consuming health supplements increases year after year. It is reported that the increasingly active lifestyles pursued by Malaysians have subsequently led to rising demand for certain dietary supplements such as glucosamine which promotes joint health. Hence, the evolving lifestyles in Malaysia impact the choice of dietary supplements to maintain and increase overall wellbeing (Euromonitor International, 2019). A wide range of health supplements are readily available in the Malaysian market, including products for joint health, digestive health, heart and circulation, stress and energy, eye health, multivitamins and antioxidants, weight management, detox and wellness products for the elderly (“Malaysia - Nutritional and Food Supplements” 2018).

Malaysia is ranked sixth in the Asia Pacific region and the top country in South-East Asia for both obesity and diabetes. This ranking concurs with the adoption of sedentary lifestyle among Malaysians (Edwards, 2013). Obesity and diabetes have been connected to serious non-communicable diseases such as heart disease and hypertension. Consumers in Malaysia are increasingly aware of such potential health issues related with eating habits and have become more proactive in searching for health products to prevent such chronic diseases. The increase in consumption of health supplements can be tied to the greater awareness of health issues and the availability of more disposal income. Greater awareness towards health issues encourages Malaysians to be health-conscious.

To remain competitive in the market, each manufacturer of health supplements need to build its own competitive advantage by identifying factors that influences the preference of consumers. According to the National Pharmaceutical Regulatory Agency in Malaysia, two-third of the Malaysian manufacturers has Good Manufacturing Practices (GMP) licenses to produce local traditional and herbal medicines, including health supplements. Certified organic and natural health supplement is a niche and growing market in Malaysia other than halal or vegetarian supplements (“Malaysia - Nutritional and Food Supplements” 2018). Currently, China is the largest exporter of nutritional and food supplements to Malaysia with a market share of 26.1 percent. Other large external sources of nutritional and food supplements are from Switzerland and Thailand (“Malaysia - Nutritional and Food Supplements” 2018).

To sum up, the aim of this study is to investigate the factors affecting the preference of health supplements among Malay ethnic in Terengganu. The majority population in Terengganu comprise of Malay ethnic. The four independent variables in this research are brand image, product quality, product availability and promotional activities of company.

Literature Review

This study attempted to investigate the relationship between the preference of health supplements among Malays ethnic and four associated factors.

Preference of Health Supplements

Health supplement is categorized as food that is safe to consume compared to drugs according to the Dietary Supplement Health and Education Act, 1994. In addition, compared to medicine; a consumer has the option of consuming health supplements on a regular basis even though the consumer does

not suffer any kind of illness or disease. In brief, it is safe to consume health supplements to complement healthy food products for the purposes of maintaining good health, boost immune system, preventing critical diseases at early stage and weight management.

The segment of young consumers represents a significant growing market for health-related products in Malaysia. Young adults are a key segment for dietary supplements not just in terms of market size, but also in terms of their lifestyle and dietary habits (Mohd Noor, Yap, Liew & Rajah, 2014). The high cost of living in Malaysia is suggested to be the main push factor for young working adults towards attaining better financial security to improve their livelihood. In turn, this leads to a more stressful lifestyle with less time to focus on healthier lifestyle choices (Norris, Anuar, Matzen, Cheah, Jensen & Hanson, 2014). Hence, the increase reliance on health supplements to stay healthy among young Malaysian adults. In aggregate, the market size of health supplements in Malaysia is expected to increase in future. This growing demand is further compounded by high obesity rate in Malaysia. In 2018, a high obesity rate continues to remain a significant social issue with a relatively high percentage of Malaysians being categorised as obese and overweight. The Tackling Obesity in ASEAN report published by Economist Intelligence Unit stated that the prevalence of obesity in Malaysia was at 13 percent while overweight was at 39 percent in 2017 (Rashid, 2017).

Some studies suggest that younger consumers in Malaysia who consume dietary supplements have been strongly influenced by their parents (Norris et al., 2014). This indicates that parents play a vital role in exposing benefits of consuming health supplements to their child from young ages. Other influencers include other family members and Internet sources. However, even though the younger consumers are aware about the benefits of taking health supplements; many do not have accurate information regarding health supplements. Therefore, there is a need to provide these young consumers with education and access to scientific and unbiased information such as access to nutritionist and physicians advices (Al-Naggar & Chen, 2011). Parents, other family members or internet sources are not fact-proof in advising ideal consumption of health supplements to anyone.

Preference of health supplements' is found to be profound in the American lifestyle. Numerous National Health and Nutrition Examination Survey indicated between half to three-quarters of American adults use dietary supplements in their daily life (Dickson & Mackay, 2014). Malaysia tail behind United States with one third of Malaysian adults taking variety of dietary supplements (Mohd Zaki et al., 2018).

Brand Image

Salinas and Perez (2009) and Bibby (2011) defined brand image as the consumer's mental picture of the offering and it includes symbolic meanings that consumers associate to the specific attributes of the product or service. Meanwhile, Low and Lamb (2000) outlined brand image as consumers' emotional perceptions attached to specific brands. Cretu and Brodie (2007) in their study mentioned that brand image represents the consumer's mind or their perceptions about a brand. It is acknowledged that brand image played an important role in a business as customer will pay attention at the brand image of a company during difficult situations such as inability to differentiate a product or service according to its tangible quality features (Mudambi, Doyle & Wong, 1997; Aldaihani & Ali, 2018). Torres and Bijmolt (2009) discussed that brand image usually sends out signals to customers in deciding to purchase a product or service. A good brand image can help the customers in reducing the cognitive risk and weigh up the review on the product or service (Kwon and Lennon, 2009).

Cretu and Broide (2007) in their study further revealed that the brand image can reflect the quality of the product or service even though the customers are looking at only the externality of products without experiencing it. While Bibby (2011) stated that the consumers will utilize brand image to infer their awareness of the product or service or maintain their quality consciousness of the product or service. Furthermore, Aghekyan-Simonian, Forsythe, Kwon and Chattaraman (2012) in their study delineated that customers will be looking at the brand image in making a purchase decision as it is related to quality guaranteeing, attribute and self-image of the product or service. In addition, Salinas and Perez (2009) analyzed that the customers often use the brand image to

differentiate the product or service's quality and decide whether to buy or not buy the product or service.

Cretu and Brodie (2007) added that brand image is not only important for a company to establish in the market but it also can help the company to gain competitive advantage against their competitors. This implies that it pays for companies to work on building and maintaining its brand image. While Torres and Bijmolt (2009) in their study also supported that brand image becomes a primary topic among companies as it will affect the attractiveness of its products or services. To encapsulate, brand image is a vital aspect for health supplements manufacturers to focus on.

Product Quality

The quality of product can be managed on a variety of levels, with each level requiring different strategies. Companies pursuing product quality should target a few dimensions on which to differentiate from competitors. Among other, Garvin (1987) analyzed eight dimensions to study product quality; explicitly performance, feature, reliability, conformance, durability, serviceability, aesthetics and perceived quality.

Brands and marketers cannot afford to lose sight of product quality. Perfecting product quality has numerous benefits for any company (Aldaihani & Ali, 2018). The positive correlation between product quality and sales should be reason enough to make quality a top priority in any business strategy. The trust, credibility, and loyalty that come from happy customers builds repeat sales and ignites positive recommendations about a product that helps a company reach new customers (Aldaihani & Ali, 2018). The higher quality product a company has to offer, the better chance it will have to convince its customers to buy.

It is crucial for a customer to look at the quality of product prior to purchasing any products or services. As stated by Aaker (1990), it is quite difficult for a customer to search for the best quality in products or services. Hence, this insinuates that there is inclination for customers to evaluate the brand of the product based on their first impression about quality of product. The customers need to make a wise decision before purchasing as it involves risks.

Bearing in mind that majority of Malaysian is Muslim, the product quality aspect of health supplements in terms of complying with halal ingredients and manufacturing requirements cannot be ignored. This point is relevant in this study as Malay ethnic who are presume to be Muslim comprise 97 percent population in Terengganu, Malaysia (Department of Statistics Malaysia, 2010).

Product Availability

As studied by Amaldoss and Jain (2005) and Balachaner and Stock (2009), the lack of product availability such as a shortage of product is one of the tactic used by marketers to stimulate demand. With this tactic, the marketers hope to make an impression to the customers that excessive demand towards the product exists. Hence, marketers expect that some customers will become more aggressive in buying the product before someone else does. However, this strategy will only succeed if the customers associate good product quality to scarcity of product.

Both product availability and lack of availability have the potential to trigger the customers' intention to buy. Studies carried out by Steinhart, Mazursky & Kamins (2013) demonstrates that, when lack of product availability is perceived positively; it influences purchase intentions via consumer involvement. However, when lack of product availability is perceived negatively, it influences purchase intentions via perceived feasibility, irrespective of consumer involvement. Hence, this confirms the indirect effect of product availability on customers' purchase preference.

In this study, the researcher uses product availability as an independent variable to study whether the availability of product will lead to a positive or negative impact to the companies producing and marketing health supplements.

Promotional Activities of Company

Crow and Baack (2014) outlined promotional activities include advertising, public relations, sales promotion, personal selling as well as database marketing, direct-respond marketing, sponsoring, social media and other alternative. It is beneficial for a company to observe the relationship between sales performance and promotional activities. Ability to identify specific performing and under-performing promotional activities will enable a company to mend weak activities while refining solid promotional activities.

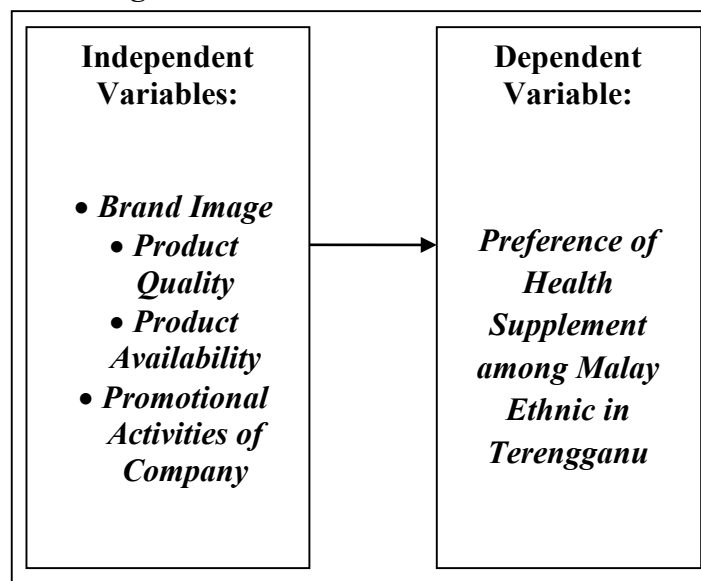
According to Kotler (2012), sales promotion consists of diverse collection of incentive tools, mostly short term designed to stimulate quicker or greater purchase of particular product or services by consumers. Generally, sales promotion tools such as free samples, coupons, price-off, premiums and testimonials by satisfied customers increases the sales volume of a company. To stay competitive in the retail markets which have been one of the most rapidly growing markets in the last decade, it is essential for retailers to use effective sales promotions tools to stimulate consumers' preference towards purchasing any product. Shamout (2016) established in his study that overall, sales promotion tools are playing an important role to stimulate customers' preference towards any promoted product. This tool impacts retailers' profit and market share. His conclusion showed that consumers' preference are positively induced by using various sales promotion tools such as samples, price discount, and buy one get one free, but only minimum effect with use of coupons. This implies that companies selling health supplements need to analyse and identify the most appropriate sales promotion tools to affect preference of customers.

Some retail companies allocate a high budget to diversify its promotional activities in order to increase the consumers' awareness of its products whilst netting more sales, considering that competitors may offer similar products with different quality levels.

The analysis of the above literature review supports the hypotheses of this study. The hypotheses of this study are:

- HA1: There is a significant relationship between brand image and the preference of health supplements among Malay ethnic in Terengganu.
- HA2: There is a significant relationship between product quality and the preference of health supplements among Malay ethnic in Terengganu.
- HA3: There is a significant relationship between product availability and the preference of health supplements among Malay ethnic in Terengganu.
- HA4: There is a significant relationship between promotional activities of company and the preference of health supplements among Malay ethnic in Terengganu.

Figure 1: Research Framework



Research Methodology

Correlational research design was chosen for this type of research. Correlation research is a quantitative method of research in which the researcher has two or more quantitative variables from the same group of participants, and the researcher is trying to determine if there is a relationship between the two variables. In this study, the research design is to test a series of hypotheses between variables which are drawn from literature. The objective is to examine the relationships between associated factors and preference of health supplements among Malay ethnic in Terengganu, Malaysia.

The researcher selected non-probability sampling for the study. Non-probability sampling is a type of sampling in which it relies on the personal judgement of the researcher instead of the likelihood of selecting the sample elements. Quota sampling was applied to each gender of respondents equally as to avoid biasness in this study.

Sampling design and sample size are important to establish the representative for the generalization. If the appropriate sample design is not used, the large sample size will not, in itself; allow the findings to be generalized to the population. The sample size of this research is 100. This sample size is determined based on the rules of thumb of Roscoe (Sekaran & Bougie, 2016). Respondents were selected from those who have purchased health supplements in the past. The data collected were coded and analysed using IBM SPSS Data Statistic.

Results and Analysis

Demographic Profile of Respondents

The Table 1 below shows that the data for this study were collected from 100 sets of questionnaire which were responded by 50 female and 50 male Malay respondents. The majority of the respondents are single, which comprise of 74 percent out of the total sample. For the age distribution, majority respondents of 62 numbers were health supplements current consumer are from 21 to 40 years old range. This corresponds with the finding of Mohd Noor et al. (2014) that the segment of young consumers represents a significant growing market for health-related products in Malaysia. While there were 30 percent respondents from the age range of less than 20 years old and 8 respondents from age above 40 years old. 65 percent respondents are actively employed and 35 percent respondents are unemployed comprising housewives, retirees, and students. For the income bracket, majority of the respondents of 79 numbers earned below RM2,000 per month, followed by 15 respondents who earned RM2,001 to RM4,000 and only 6 respondents earned above RM8,000. It is acknowledged that 64 respondents who represent the majority of respondents have membership for health supplements' purchase. This membership status is a telltale sign that certain health supplements' companies attract recurring sales from its loyal customers.

Table 1: Respondents' Profile.

		Frequency	Percentage
Gender	Male	50	50.0
	Female	50	50.0
Marital Status	Single	74	74.0
	Married	26	26.0
Age	< 20 years old	30	30.0
	21 - 40 years old	62	62.0
	> 40 years old	8	8.0
Employment Status	Employed	65	65.0
	Not employed	35	35.0
Income	< RM2,000	79	79.0
	RM2,001 - RM4,000	15	15.0
	> RM4000	6	6.0
Membership for Health Supplements Purchase	Yes	64	64.0
	No	36	36.0

Reliability and Correlational Analysis

According to Sekaran (2010), reliability analysis is conducted for the purpose of measuring the reliability and internal consistency of the variables in the study. Findings shown in Table 2 indicate that the Cronbach's alpha for 3 variables; brand image, product quality and promotional activities of company are within the ranges of 0.633 to 0.676. These 3 variables measured are considered moderately reliable and acceptable. The promotional activities variable is leading with the value of 0.676. While the Cronbach's alpha for product availability is 0.507 which is considered poorly reliable but acceptable.

In addition, the Pearson Correlation analysis was used to statistically test the strength of the relationship between two variables. The findings shown in Table 2 indicate that the Pearson correlations for product quality, product availability and promotional activities for company variables are ($r = 0.304, p < 0.01$), ($r = 0.311, p < 0.01$) and ($r = 0.311, p < 0.01$) respectively indicating all are significant with weak positive relationship to preference of health supplements. While the Pearson correlation for brand image variable is ($r = 0.161, p < 0.05$) indicating it is significant but has very weak positive relationship to the dependent variable ($r = .161, p < 0.01$).

Table 2: Results of Reliability and Correlation Analysis for Independent Variables and Dependent Variable

Variables	Mean	Cronbach' alpha	Pearson Coefficient r value
Brand Image	3.46	(.668)	.161*
Product Quality	4.05	(.633)	.304**
Product Availability	3.30	(.507)	.311**
Promotional Activities of Company	3.23	(.676)	.311**
Preference for Health Supplements	3.10	(.622)	

.. Correlation is significant at the 0.01 level (2-tailed).

. Correlation is significant at the 0.05 level (2-tailed). N=100.

The hypotheses designed in this study are tested by examining the influence of four associated factors; brand image, product quality, product availability, and promotional activities of company, towards preference of health supplements among Malay ethnic in Terengganu. To test the hypotheses, multiple regression analysis was conducted.

Multiple Regression Analysis for Independent Variables and Dependent Variable

The purpose of this paper is to investigate the relationship between associated factors; brand image, product quality, product availability, and promotional activities of company and preference of health supplements. The multiple regression result indicates that significant relationships exist among some variables as hypothesized. The results of the regression analyses have shown that there was no serious violation of the assumption of independent observations which stipulated no multicollinearity issue.

Findings indicate that there are a positive relationship between 3 associated factors; product quality, product availability, and promotional activities of company and preference to health supplements among Malay ethnic in Terengganu. However, there is a negative relationship between brand image and preference to health supplements indicating there is no relationship between brand image and preference of health supplements among Malay ethnic in Terengganu.

The results for regression coefficients are shown in Table 3.

Table 3: Regression Coefficients for Contributing Factors and Customer Loyalty

Variables	Standardized Beta
Brand Image	-0.117
Product Quality	0.227 ^{**}
Product Availability	0.223 ^{**}
Promotional Activities of Company	0.123 [*]
R ²	.155
Adjusted R ²	.119
F Value	4.346
Significance F Value	.003

Table 3 shows the multiple regression analysis between associated factors and preference of health supplements. R² in this study is 0.155 which indicates that 15.5 percent of the preference of health supplements among Malay ethnic in Terengganu can be explained by the four associated variable. The other 84.5 percent can be explained by other variables which are not included in this study such as opinion and belief about product and attitude towards product. This result shows weak significance, as indicated by the F Value of 4.346. From the result of this analysis, the researcher found that only product quality and product availability variables has positive impacts to the preference of health supplements (p<0.1). The significant value for product quality is .045 and product availability is .058. For brand image which is .332 and promotional activities for company is .324, the impact on preference of health supplements are non-significant at (p<0.1).

The Table 4 below summarizes the result of hypothesis testing in this study.

Table 4: Result of Hypothesis Testing

Hypothesis	Relationship	Correlation r value	p value	Decision
H1	Brand Image → Preference of Health Supplements among Malay ethnic in Terengganu	0.161	.332 ^{**}	Not Supported
H2	Product Quality → Preference of Health Supplements among Malay ethnic in Terengganu	0.304	.045 [*]	Supported
H3	Product Availability → Preference of Health Supplements among Malay ethnic in Terengganu	0.311	.058 [*]	Supported
H4	Promotional Activities of company → Preference of Health Supplements among Malay ethnic in Terengganu	0.311	.324 ^{**}	Not Supported

Discussion and Conclusions

There is negative linear relationship between brand image and preference of health supplements among Malay ethnic in Terengganu, Malaysia. Majority respondents disagreed that they will still buy the health supplements if they are not familiar with the brand. But most of them agree that product effectiveness will reflect the health supplements' brand image. Likewise, negative linear relationship also exists between promotional activities and preference of health supplements among Malay ethnic in Terengganu. Majority respondents disagree that they will purchase a health supplement's brand if

the brand is regularly advertised in various media. Respondents are also less responsive to flyers of health supplements' brands distributed by suppliers. However, majority respondents agree that they will purchase a health supplement's brand if the brand is supported by victorious testimonials from past and current users. Both promotional activities through advertising in various media and distributing flyers at random to the public are less effective in convincing the public to purchase the advertised brands of health supplements. Considering the risk factor that consuming health supplements could wind up in negative results to the health and life of human, companies need to be more selective in their promotional activities' choice. Promotional activities such as organizing free health screening and talk for customers, and inviting satisfied past or current users to share their experiences during health campaigns are deemed appropriate for promoting health-related products.

Both product quality and product availability variables have positive linear relationships on the preference of health supplements among Malay ethnic in Terengganu. Majority respondents are willing to pay more if the health supplements are high in quality and effective for the very purpose it was purchased. Other than expecting the health supplements to be available for sale as and when need, respondents are concerned about gaining advice prior to purchasing any health supplements. Relating to the risk factor of consuming health supplements again; majority respondents prefer to walk into a physical store such as a pharmacy or health supplier outlet rather than purchasing the products online. This is related to the desire of consumers wanting to consult a health expert such as the pharmacist or nutritionist prior to purchase. With the advance information technology in this era to facilitate retail transactions to be conducted online, it does not mean it suits every category of retail. Majority respondents indicated they still rely on traditional brick and mortar transactions when purchasing health supplements on many occasions.

The future researchers should diversify research methods to gather information to facilitate future related studies. As this study only focused on respondents who have experience purchasing health supplements in Terengganu, the result cannot be generalized to all health supplements consumers in Malaysia based on their differing thoughts, cultures and demographic factors. In order to improve the validity of the study, scope of study should be expanded to other states and sample size increased. Although the number of respondents was valid for the purpose of this study, a wider number of respondents would strengthen the current findings. Other mediating factors on the relationship between dependent variable and independent variables such as opinion and belief about product and attitude towards product can be included in future studies.

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