

HALAL NUTRACEUTICAL PRODUCTS: WHAT DETERMINES CONSUMERS' INTENTION TO PURCHASE?

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ABSTRACT

The advancement of food technology allows for the growth of beauty and health products. As the society places more concern on product security, nutraceuticals become an option. However, what is considered safe is not necessarily halal. Therefore, the study was conducted to examine the factors that consumers believe are important in determining their intention to consume halal nutraceutical products. Based on the Theory of Planned Behavior, a survey was conducted among consumers and the results show religiosity, health consciousness and subjective norms are playing the pertinent roles in determining the halal consumption intention, with social norms being the most influential factor. The study highlights on the importance of halal in every aspect of an individual's life and it is more important when it concerns health. Discussion and future research suggestions are provided.

Keywords: Halal, factors to consume halal nutraceuticals, halal in Malaysia, nutraceutical products, halal and religiosity

INTRODUCTION

Halal is an extensive concept. It does not only focus on food, but it involves all aspects of one's life. As interest in quality healthcare products such as nutraceutical and pharmaceutical increases, businesses are competing in innovating and presenting health and cosmetic products to consumers. It is estimated that the worldwide value is close to USD1.3 trillion while Malaysia has a market worth at RM3.5 billion. Thus, although nutraceutical is new, it has huge potential in the halal field.

Halal and Muslims are inseparable. According to the Islamic law, halal means permissible or lawful. When used in relations to food in any form in the course of trade or business or as part of a trade description, halal is the certification of lawful products or foods or beverages. As mentioned in the Holy Quran and Sharia, Islamic followers are only permitted to consume lawful, hygienic, safe and good foods, drinks and products as these elements shape one's behaviour and are related to health concerns. In fact, the basis of halal is hygiene and health (Talib, Ali, Jamaludin & Rijal, 2008).

In addition to halal, other word that is related to lawful products consumption is religiosity. Worshipping and religious beliefs do shape a person's behaviour. In order to shape beliefs, knowledge and attitudes, religious commitment plays a significant role. Religious commitments and beliefs will affect feelings and attitudes of people toward consumption or consumer's behaviour (Jamal, 2003).

While previous studies of halal acceptance are abundant, investigation on halal acceptance of nutraceutical health products requires more effort. In Malaysia, nutraceutical products are numerous which call for intense competitions. These include Aura White, Qu Puteh, D Herbs, K-Colly, HPA Products, Halagel, Nona Roguy and many more. Even though medicine is considered as an exemption from halal food regulations, various efforts are on-going to research into the area of Halal pharmaceuticals and nutraceuticals as consuming the products that are halal certified improves spiritual confidence and is fundamental to religious requirements. Yet, when it comes to beauty and health, mixed results are always found in terms of halal acceptance. Therefore, the study is aimed at examining the factors that determine the Muslim consumers intention to consume Halal nutraceutical products

LITERATURE REVIEW

Halal and Nutraceutical Products in Malaysia

The nutraceutical business sector is growing due to the advancement of the food and healthcare industries. Nutraceutical are products that are believed to promote better healthcare that provide protections against chronic diseases or give physiological benefits. They can be found in flavonoid antioxidants from various herbs such as *lingzhi*, *tongkat ali*, turmeric and beta-carotene from palm oil. In Malaysia, nutraceutical products are highly sought for the health promotion believe and the branding strategy (Daud, Abd Jalil, Azmi & Ismail, 2017).

As consumers become more aware of the benefits of healthy eating, they are increasingly aware of healthy foods and pay more attention to nutrition (Thomas & Mills, 2006). Therefore, health consciousness has become a concern. Similarly, in explaining for halal consumption, Islamic practices or religiosity is very important. Muslim consumers' behaviour

is highly influenced by the Quranic philosophy of what is permissible and what is not permissible. These include adultery, gambling, interest on money, liquor, pork, blood of animals as well as the meat of animals sacrificed in the name of other than Allah (Al-Qadawi, 1999; Al-Bukhari, 1976). People who practice or obey religiosity are concerned with what they eat and consume.

Furthermore, in consuming halal, the surroundings and the person's attitude towards halal are also important. This is indicated as people's intention and behaviour towards food and products consumption are highly related to the attitudes and subjective norms. A recent study by Khalek and Ismail (2015) on halal consumption among gen Y in Malaysia found a significant role of subjective norms in explaining for halal consumption. The assumptions on how religiosity, health consciousness, attitude and subjective norms determine halal nutraceutical products are discussed in the next section.

Factors That Influence the Intention to Consume Halal Nutraceuticals Products

Religiosity is the extent to which an individual is committed to one's religious teachings. Believing, worshipping and giving charity are the core of Islam as well as the basis of spiritual presence (Aydin, 2013). Most religions prescribe or prohibit certain acts including consumption behaviour (Sungkar, 2010). In Islam, it is clearly stated that non-Halal is strictly forbidden for human consumption. As purchasing decision is influenced by religious identity, orientation, knowledge and beliefs, it is predicted that similar behaviour will be performed when a consumer intends to consume Halal nutraceutical products. Thus, the following hypothesis is offered:

H1: There is a significant relationship between religiosity and behavioural intention to consume Halal nutraceuticals.

Health consciousness reflects a person's openness and readiness to improve his health. A conscious consumer is aware of what he is buying. Health consciousness predicts a variety of health attitudes and behaviours (Michaelidou & Hassan, 2008). Similarly, Cherrier (2009) found health conscious consumers have a preference for healthier alternatives of products. It is predicted they will opt for nutraceutical products for a healthier lifestyle. Therefore, the following hypothesis is offered:

H2: There is a significant relationship between health consciousness and behavioural intention to consume Halal nutraceuticals.

Attitude is the evaluation of performing a particular behavior. The relative importance of attitude in the prediction of intention is expected to vary across behavior and situations. According to the expectancy-value model, attitudes toward a behavior is determined by the total set of accessible behavioral beliefs linking the behavior to various outcomes and other attributes (Azjen, 1991). A person who regards Halal will have the intention to consume Halal products.

H3: There is a significant relationship between Halal attitude and behavioural intention to consume Halal nutraceuticals.

People's behaviour and intention are also predicted by subjective norms. If social expectation requires a person to behave in certain behaviours, then the person will be more likely to do

so. In this context, if purchasing Halal products is assumed to be a socially desirable behaviour, then the person is more likely to make a decision to consume Halal nutraceuticals. Equally important is the social behaviour of the Muslim consumers in Malaysia who tend to look at Halal logo and certification as a form of Halal assurance (Khalek & Ismail, 2015).

H4: There is a significant relationship between social norms and behavioural intention to consume Halal nutraceuticals.

RESEARCH METHODOLOGY

Data Collection

Prior to the actual data collection, a face and content validity was performed by seeking the opinions from the experts in the field. Next, a pilot test was conducted to assess the reliability of the instruments (Schade, 2015). 30 respondents took part in the pilot test and the results of the internal consistency score for each variable yielded a value of more than 0.700, indicating the internal consistency was assumed.

The survey method was employed to collect the primary data from halal consumers in Malaysia aged 21 and above. There was no specific segmentation or criteria of the sample, and the sampling technique used was purposive sampling. There are various recommendations for sampling size. Following the G*power calculation for determining a sample size, with an effect size of 0.15 and the number of predictors equals to 4, a total of 129 sample was suggested. However, taking into consideration for sampling errors, the sample number was set to 200. To ensure for a good participation rate, the researcher approached the potential respondents at shopping malls and pharmacies. However, the rules of cross-sectional study and confidentiality were strictly adhered. The demographic profiles of the respondents are shown in Table 1.

Table 1: Demographic Profiles

Variable	Frequency	%
Gender		
Male	74	37.0
Female	126	63.0
Age		
21 - 30 years old	75	37.5
31 - 40 years old	65	32.5
41 - 50 years old	38	19.0
51 - 60 years old	22	11.1
Profession		
Student	27	13.5
Government servant	121	60.5
Others	52	26.0
Marital Status		
Single	57	28.5
Married	143	71.5

Measurement Model

Prior to the bivariate analysis, missing data analysis and non-response bias procedures were performed. The results show that there is statistically no significant difference between early and late respondents. Therefore, non-response bias does not present. In addition, a normality test was conducted to fulfill the underlying assumptions in parametric testing. Based on the skewness and kurtosis results, it was assumed for a normal distribution.

In assessing the measurement model, three main assessment criteria were used. These are the internal consistency reliability, convergent validity and discriminant validity. Factor loadings and AVE are used to assess the convergent validity. The presentation of the results is shown in Table 2. All the constructs meet the threshold values for CR and AVE, where all CRs are greater than 0.7 and all AVEs are greater than 0.5 (Hair *et al.*, 2017). Therefore, it is concluded that the constructs meet the reliability and convergent validity.

Table 2: Measurement Model

	Mean	Standard Dev	Loadings	Cronbach's Alpha	CR	AVE
Health Consciousness				0.776	0.846	0.532
I like going to steam baths, spas or saunas	3.085	1.295	0.504			
My appearance is very important	4.155	0.861	0.652			
I do something for my appearance	4.120	0.745	0.750			
I regularly take food supplements	3.925	1.024	0.791			
I buy food with additional health benefits	4.040	0.848	0.890			
Religiosity				0.735	0.824	0.541
I avoid shameful acts	4.540	0.720	0.750			
It is important to show good manners	4.755	0.524	0.637			
Religious beliefs influence all my dealings	4.735	0.515	0.766			
My duty is to respect the rights of everyone	4.855	0.379	0.780			
Attitude				0.535	0.767	0.579
I Prefer to choose Halal nutraceutical products	4.490	0.854	0.907			
Choosing Halal nutraceutical products is a good idea	4.605	0.706	0.936			
I have problems in choosing the suitable nutraceutical products	3.590	1.128	0.194			
Subjective Norm				0.789	0.848	0.547

I choose Halal products based on information through advertisement in mass media	3.205	1.180	0.397			
Detailed information on the packaging of nutraceutical products such as Halal logo gives the influence on the decision to buy a product	4.060	0.909	0.553			
Others' experiences are good source of information that I refer before selecting the nutraceutical products	4.195	0.785	0.826			
My family members prefer Halal nutraceuticals products	4.430	0.797	0.887			
My friends would think that I should choose Halal nutraceutical products	4.380	0.765	0.896			
Intention				0.923	0.94	0.723
I plan to choose Halal nutraceutical products	4.260	0.966	0.859			
I am likely to choose Halal nutraceutical product	4.305	0.928	0.884			
I will choose Halal nutraceutical products	4.365	0.807	0.824			
Quality and Halal confirmation is a priority	4.370	0.802	0.864			
I will purchase when I am confident with the product	4.340	0.724	0.815			
I will purchase after I studied about the product.	4.34	0.724	0.855			

Next, the discriminant validity of the model is also assessed. The results shown in Table 3 indicate all constructs exhibit sufficient or satisfactory discriminant validity, where the square root of AVE (diagonal) is larger than the correlations for all the reflective constructs.

Table 3: Discriminant validity using Fornell and Lacker Criterion

	Religiosity	Health	Social norm	Attitude	Intention
Religiosity	0.736				
Health	0.338	0.730			
Social norm	0.465	0.551	0.740		
Attitude	0.435	0.561	0.640	0.761	
Intention	0.480	0.501	0.681	0.472	0.850

Another method to assess the discriminant validity is by comparing the cross loadings between constructs. In this method, each indicator should load high on its own construct but low on other constructs. As indicated in Table 4, there are evidences for acceptable discriminant validity.

Table 4: Cross loading

	Religiosity	Health	Social norm	Attitude	Intention
Health1	0.122	0.504	0.194	0.172	0.171
Health2	0.455	0.652	0.405	0.557	0.328
Health3	0.084	0.750	0.370	0.353	0.288
Health4	0.115	0.791	0.387	0.348	0.327
Health5	0.355	0.890	0.541	0.512	0.557
Rel1	0.750	0.282	0.488	0.292	0.463
Rel2	0.637	0.118	0.073	0.354	0.165
Rel3	0.766	0.314	0.347	0.327	0.317
Rel4	0.780	0.221	0.293	0.354	0.349
Att1	0.494	0.563	0.541	0.907	0.405
Att2	0.381	0.501	0.633	0.936	0.456
Int1	0.429	0.324	0.550	0.351	0.859
Int2	0.440	0.358	0.573	0.328	0.884
Int3	0.472	0.489	0.613	0.433	0.824
Int4	0.486	0.438	0.597	0.421	0.864
Int5	0.283	0.443	0.526	0.388	0.815
Int6	0.314	0.495	0.601	0.473	0.855
SN2	0.105	0.017	0.553	0.258	0.271
SN3	0.441	0.640	0.826	0.515	0.583
SN4	0.470	0.499	0.887	0.647	0.604
SN5	0.476	0.513	0.896	0.642	0.650

RESULTS AND DISCUSSION

Prior to evaluating the structural model, it is crucial to ensure that there is no lateral collinearity issue in the structural model. Table 5 presents the results of the lateral collinearity test. All the inner VIF values for the independent variables are less than 5, indicating lateral multicollinearity is not a concerned in the study (Hair *et al.*, 2017).

Table 5: Lateral Collinearity Assessment

	Intention
Religiosity	1.334
Health	1.610
Social norm	1.984
Attitude	1.955
Intention	

Next, the four hypotheses were tested for the significant level and the t-statistics are generated using the SmartPLS 3.0 bootstrapping function. Based on the results in Table 6, relationships with t-value ≥ 1.645 , thus significant at 0.05 level of significance are religiosity ($\beta = 0.198$, $p < 0.05$), health consciousness ($\beta = 0.172$, $p < 0.05$) and social norms ($\beta = 0.523$, $p < 0.01$), which explain 51.5% of the variance in intention to purchase Halal nutraceutical products. This value is considered substantial. Therefore, H1, H2 and H3 are supported. Similarly, the effect sizes (f^2) are also assessed. The results show that the effect sizes are small for religiosity and health consciousness, and medium for social norms in producing the R^2 for the intention. In addition, the predictive relevance of the model is examined using the blindfolding procedure. The Q^2 value of 0.336 indicates the model has the sufficient predictive relevance as it is greater than 0.00 (Hair *et al.*, 2017).

Table 6: Path Coefficient Assessment and Determination of Coefficient (R^2) and Effect Size (f^2)

	Std. Beta	Std. Error	t-value	P Values	Decision	R^2	f^2	Q^2
Religiosity -> Intention	0.198	0.06	3.306	0.001	Supported	0.515	0.061	0.336
Health -> Intention	0.172	0.067	2.551	0.006	Supported		0.038	
Social norm -> Intention	0.523	0.063	8.302	0.000	Supported		0.285	
Attitude -> Intention	-0.046	0.079	0.581	0.281	Not Supported		0.002	

In planning to choose nutraceutical products, one's commitment to religion is important. Halal status is an obligation that needs to be fulfilled. Mokhlis (2006) describes a highly religious person makes decisions based on the conduct of spiritual beliefs and integrates his religion practices into his life. In addition, the rise of Islam and the understanding that it is a way of life has led to the increase of user awareness on content, processes, sources and other determinants of Halal consumption (Hearty, McCarthy, Kearney & Gibney, 2007). A study conducted by Ahmad, Rahman and Ab Rahman (2015) concluded that religiosity plays a more influential factor towards Halal behavior compared to other predictors such as knowledge. Thus, as Halal is compulsory for Muslims, those who have strong faith and believe in Islam, will always choose Halal as the life priority.

In addition, even though health and beauty products are numerous in the market, and they come with attractive packages and prices, the Halal status will not be compromised. Muslims who regard health as very important in life tend to choose Halal products. This is in line with the key principle of Halal that is wholesomeness that leads them to believe Halal is safe, healthy and good. Similar findings were generated by Rezai, Mohamed, Shamsudin and Chiew (2010) who stated that consumers chose Halal because of the quality characteristics, which emphasize on safety and sustainability.

Furthermore, influence from family, friends and surrounding is important to influence one's decision in consuming Halal products. In our findings, the Halal logo and the ingredients are playing the roles in influencing the decision to purchase the nutraceutical products.

Therefore, providing adequate Halal information on the product labeling and packaging is essential to ensure the right information is delivered. In addition, the Halal logo will boost the consumer's confidence on the product's compliance to religious requirements.

However, our findings did not find any evidence of attitude towards Halal nutraceutical products as an important factor in determining the intention. Thus, it requires a careful investigation of the reason. Unlike the findings, Aziz and Chok (2013) and Ahmad, Rahman and Ab Rahman (2015) found attitude and awareness were positively related to the intention to purchase Halal products. Belief is an important determinant to one's decision. Believing Halal is doing good to the health increases the chances that the consumers will like to consume Halal products.

CONCLUSION

In conclusion, this study emphasizes on the importance of religiosity and health consciousness in determining the intention to consume Halal nutraceutical products. While many studies have been applying Technology Acceptance Model (TAM) to explain Halal intention and behavior, our findings suggest that cumulating religiosity, health consciousness, social norms and attitude provides significant predicting factors. However, in achieving greater acceptance of Halal, we suggest some recommendations.

First, as Halal is a religious command, it should be emphasized as what Allah has ordered to the *ummah*. Halal education should be widely taught to all levels of society. The misconception that Halal is a tradition and it is about a particular race's culture that emphasizes solely on food and beverages should be corrected. The society should be educated that Halal is a way of life, that it touches every aspect of production from raw materials to consumption. The Muslim society should be educated that pork is not about the meat only, but there are thousands of substances that could be extracted from the prohibited animal and used widely even in a product that emphasized on herbs like the nutraceutical products.

Second, as our findings suggest health consciousness and social norms are indicators to Halal consumption decision, sufficient information on Halal must be provided. Providing Halal logo is the simplest method. However, as there is no single worldwide Halal logo, irresponsible parties might abuse the various logos from different countries. Hence, supplying the consumers with the ingredients information should be emphasized.

Third, as the country rule suggests getting the Halal certification verifies for the *Halalan toyyiban* of the product, a less complicated procedure should be made available. Though the current process may be suitable for some organizations, it is not friendly enough for the cottage industries. Nutraceuticals are always associated with plants and herbs, and a significant number of small businesses contribute to the national production. With the aids and incentives to these business in getting Halal certification, it will help them to market more acceptable products which are safe and healthy.

In summary, Halal is mandatory for a Muslim. As Halal is an extensive concept, there is unlimited opportunities for Halal research and studies. We suggest future studies to investigate how small businesses are strategizing for penetrating the world Halal market given the challenges to compete with large organizations, trade barriers and Halal

misconceptions. In addition, we also suggest for researchers to formulate a model in making Halal integrity a less complicated procedure for the benefits of all *ummah*.

REFERENCES

- Ahmad, A. N., Rahman, A. A., & Ab Rahman, S. (2015). Assessing knowledge and religiosity on consumer behavior towards Halal food and cosmetic products. *International Journal of Social Science and Humanity*, 5(1), 10.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Al-Bukhari. (1976). *Sahih Al-Bukhari*. Chicago, IL: Kazi Publications.
- Al-Qadawi, Y. (1999). *The lawful the prohibited in Islam*. 20th Ed. Indianapolis, IN: American Trust.
- Aydin, H. (2013). Positive effects of believing, prayer and spending in charity on the inner peace of believers. *Global Journal of Al Thaqqafah*, 3(2), 37 - 47
- Aziz, Y. A., & Chok, N. V. (2013). The role of Halal awareness, Halal certification, and marketing components in determining Halal purchase intention among non-Muslims in Malaysia: A structural equation modeling approach. *Journal of International Food & Agribusiness Marketing*, 25(1), 1-23.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- Cherrier, H. (2009). Anti-consumption discourses and consumer-resistant identities. *Journal of Business Research*, 62(2), 181-190.
- Daud, M, Abd Jalil, J, Azmi, I & Ismail, S. F. (2017). *Unsafe' Nutraceuticals Products on the Internet: The Need for Stricter Regulation in Malaysia*. 10.1109/CITSM.2017.8089269.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis (Vol. 6)*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632.
- Hearty, A. P., McCarthy, S. N., Kearney, J. M., & Gibney, M. J. (2007). Relationship between attitudes towards healthy eating and dietary behaviour, lifestyle and demographic factors in a representative sample of Irish adults. *Appetite*, 48(1), 1-11.
- Jamal, A. (2003). Marketing in a multicultural world: The interplay of marketing, ethnicity and consumption. *European Journal of Marketing*, 37(11/12), 1599-1620.
- Khalek, A. A., & Ismail, S. H. S. (2015). Why are we eating Halal-using the theory of planned behavior in predicting Halal food consumption among Generation Y in Malaysia. *International Journal of Social Science and Humanity*, 5(7), 608.
- Michaelidou, N., & Hassan, L. M. (2008). The push and pull towards organic: clarifying the roles of health consciousness, food safety concern and ethical identity. *International Journal of Consumer Studies*, 32, 163-170.
- Mokhlis, S. (2006). The effect of religiosity on shopping orientation: an exploratory study in Malaysia. *Journal of American Academy of Business*, 9(1), 64-74.
- Rezai, G., Mohamed, Z. A., Shamsudin, M. N., & Chiew, E. F. C. (2010). Non-Muslims' awareness of Halal principles and related food products in Malaysia. *International Food Research Journal*, 17(3), 667-674.

- Schade, A. (2015). Pilot testing: Getting it right (before) the first time. Nielsen Norman Group.
- Sungkar, I. (2010). Consumer awareness: Thoughts and trends across the globe. *The Halal Journal*, 22-28.
- Talib, H. A., Ali, K. M., Jamaludin, K. R., & Rijal, K. (2008, May). Quality assurance in Halal food manufacturing in Malaysia: A preliminary study. In *International Conference on Mechanical & Manufacturing Engineering (ICME2008)* (pp. 21-23).
- Thomas, L., & Mills, J. E. (2006). Consumer knowledge and expectations of restaurant menus and their governing legislation: a qualitative assessment. *Journal of Foodservice*, 17(1), 6-22.