

The Tendency to Use Sunnah Functional Food among Students in Malaysia

Rozilah Hamdan, Fidlizan Muhammad, Azila Abdul Razak, Nurhanie Mahjom

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v8-i1/3845>

DOI:10.6007/IJARBSS/v8-i1/3845

Received: 22 Dec 2017, Revised: 25 Jan 2018, Accepted: 27 Jan 2018

Published Online: 03 Feb 2018

In-Text Citation: (Hamdan, Muhammad, Razak, & Mahjom, 2018)

To Cite this Article: Hamdan, R., Muhammad, F., Razak, A. A., & Mahjom, N. (2018). The Tendency to Use Sunnah Functional Food among Students in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 8(1), 747–761.

Copyright: © 2018 The Author(s)

Published by Human Resource Management Academic Research Society (www.hrmars.com)

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: <http://creativecommons.org/licences/by/4.0/legalcode>

Vol. 8, No.1, January 2018, Pg. 747 - 761

<http://hrmars.com/index.php/pages/detail/IJARBSS>

JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at
<http://hrmars.com/index.php/pages/detail/publication-ethics>

The Tendency to Use Sunnah Functional Food among Students in Malaysia

Rozilah Hamdan, Fidlizan Muhammad, Azila Abdul Razak,
Nurhanie Mahjom

Faculty of Management and Economic, Universiti Pendidikan Sultan Idris, Tanjong Malim,
Perak, Malaysia

Abstract

The purpose of this study is to identify the influence of factors that affect the tendency to use sunnah functional foods among students using the Theory of Planned Behaviour (TPB). There are three variables for the TPB theory which are attitude, subjective norms and perceived behaviour control which are analysed together with a mediator variable, health claim. This study was quantitative and applied questionnaires as a research instrument in the data collection process. 422 students were selected to be a sample of the study based on a random sampling method of a one-tier cluster. The combination of descriptive and inferential statistics is done in data processing to achieve the objective of the study. The results of the analysis showed that there were four (4) significant hypotheses that also supported the findings. The findings of the analysis show that two variables, which are subjective norms and behavioural controls on the tendency to use sunnah functional foods, are significantly related. Mediator variables show the effect of a moderate intermediary through two variables, attitude and behavioural control. The result of this analysis shows that the TPB theory is able to predict the behaviour of the sunnah functional food. Health claims as a mediator variable are also found to be important as significant factors that attract users to use sunnah functional products. Therefore, the manufacturer's actions are marketing functional products by promoting health benefits affecting consumer behaviour. Consequently, producers need to be sensitive and responsible for the claims of the health capabilities offered in a product to ensure consumers receive the nutritional benefits and ultimately form consumer-positive healthy eating habits.

Keywords: Functional Food, Sunnah Functional Food, Theory of Planned Behaviors, Health Claim

Introduction

Food is an important source of energy and protein to the human body. Therefore, the choice of food that meets the health objectives cannot be underestimated by the community. Consumer concerns in choosing healthy food products are an important national agenda for every user

(Salleh, Mohd Noor, Nik Mat, Yusof, & Mohamed, 2015). The community needs to ensure that the food is taken to provide health benefits and not just to meet the needs of the taste. Irritation and control of food can lead to exposure to various disease risk (Chaudhry et al., 2008). In this regard, alternative food intake or vitamins or juices that can compensate for edible food sources can enhance the health and metabolism of the body.

Functional foods are supplements that contain various ingredients that benefit the body and can avoid risky illness. For Muslim consumers, the use of food is subject to halal and 'tayyiban' terms. Therefore, the production of a functional food based on a mixture of Sunnah sources is a focus among producers and has been marketed and labeled as sunnah food. The mix of sunnah materials and its advantages has been promoted by the producers by using proof or arguments that are derived from the Quran and al-Hadith to attract the attention of the users. In this regard, the extent to which users are attracted to this sunnah food for use in daily routine nutrition is interesting to be studied further.

Study Background

Consumption of a type of food should not just be aimed at satisfying the needs or tastes. Food implications on health quality should now be given priority. Now the need to take food to improve health, intelligence, metabolism and energy are the needs of every human being and cause healthy lifestyle practices through nutrition. Additionally, the community has knowledge of the importance and benefits of a food that honors self-esteem that contributes to good health (Urala & Lahteenmaki, 2007). Accordingly, the level of individual health is interconnected with the source, lifestyle and daily dietary practices. Consequently, the sensitivity and the user's knowledge of the effects of intake on food especially excessively or without control is important for short-term and long-term health. According to Euromonitor International (2016) report, the level of community awareness in Malaysia on nutrition is balanced and the effect is increasingly positive. This is supported by the growing production and marketing of products enriched with vitamins, minerals and natural substances that have led to positive consumer acceptance of health benefits from food taken.

The health claim from food is also a priority for Muslim communities. Islam has set specific criteria regarding the recruitment of food sources that must be characterized as halal and 'tayyiban' or safe for the body which refers to a clean source of food from dubious elements such as gallbladder, blood, fat, alcohol, animal limbs that are not slaughtered and animals that are forbidden like pigs. The concept of halal food in Islam is also extensive involving original sources, content and benefits (Farhana, 2015). Accordingly, the halal logo labeling is an easy guide for consumers to identify the status of the halal products. Therefore, the action or choice of the producer to use a mixture of sunnah ingredients in the production of functional foods can increase the consumer's confidence in the product's and its content inhalation together (Khadler, Faisal & Monika, 2015).

For Muslim users, besides the halal logo, content in functional foods is important to know. The production of functional foods that uses sunnah food ingredients as found in the Qur'an and al-hadith such as dates, raisins, habbatussauda, and honey are now the choice of producers. These sources have been mixed and extracted using technology to produce functional foods

called sunnah food. Product marketing with sunnah food brands is also promoted with the ability to meet health claims as well as other functional foods available in the market. It is also important to note that sunnah's functional food products need to compete in the existing functional food market. The potential for expanding the sunnah's functional food market is often closely related to the willingness or the factors associated with the user. Therefore, this study focuses on elements of factors that can influence the tendency of the user to use the functional food characterized by the sunnah.

Literature Review

Consumer consumption spending can be influenced by various factors. However, in this study the behavioral theory of the Theory of Planned Behavior (TPB) introduced by Ajzen (1991) was applied. Through this TPB theory, there are three main factors that influence behavior in the use of a product or service known as attitude, subjective norm and perceive behavior control.

Theory of Planned Behaviour

The theory of Planned Behavior (TPB) by Ajzen (1991) is an extension of the theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975). These two theories are differentiated by a variable which is a perceive behaviour control (PBC) that influencing the behavior of a person to act or to decide on his or her goals (Ajzen, 1991). In comparison, Armitage and Conner (2001) find that the TPB theory is better than the TRA theory in terms of measurement of behavior with the addition of perceive behaviour control factors that further reinforce the measurement and correlation between intentions or personal predictions with human will. TPB theory is also used by several studies to measure user behavior on food consumption (Syez & Nazura, 2011; Teng & Wang, 2015; Moser, 2015; Suki & Salleh, 2016; Wibowo & Ahmad (2016). TPB theory was also found to be effective in assessing actions that caused individuals to use functional foods including studies from Patch, Tapsell and Williams (2005) that attitude, subjective norms and perceive behavior control were strong variables in describing the use of functional foods in the Illawarra region in New South West. Similar findings were also obtained by other researchers such as Haque, Sarwar, Trofder, and Hossain (2015), Yadav and Pathak (2016) and Rezai, Teng, Mohamed and Syamsudin (2012).

Methodology

To measure the tendency of consumers to use sunnah functional food, a total of 384 respondents were randomly selected. The study applies quantitative methods involving questionnaires as a study instrument comprising three parts, namely A, B and C. Part A is about knowledge and benefits related to the main sunnah ingredients such as dates, raisins, habbatussauda and honey (DRHH) including consumer perceptions about sunnah's functional food products. Part B has 20 questions that are based on three main variables which are attitudes, subjective norms, perceive behavioral controls, health claim and also dependent variables namely tendency to use sunnah functional food by using Likert scale with size 1; very disagree to 5; very agree. The choice uses five (5) likert scales as it is a simple and easy for respondent to read and make answer choices (Dawes, 2008). While part C is related to the background of respondents. A questionnaire was adopted with some modifications to earn information on the tendency to use sunnah functional food.

The respondents of the study involved students from four different universities namely Universiti Teknologi Malaysia (UTM), Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM) and Universiti Malaysia (UM). Determination of size or number of samples is done by random sampling of one-level cluster by dividing the sample amount into the four universities. In order to ensure the return of the questionnaire according to the total number required, the sample size was increased by 10 percent (Roscoe, 1975) and made the total number of respondents 422, but only 408 respondents are fulfill the needs of the study. This study uses a combination of two statistical tools that are descriptive and inferred with the use of two different software, namely IBM SPSS and Smart Partial Least Squares-SmartPLS 2 as data analysis techniques. This study has used two approaches to evaluate and report on the findings of the PLS-SEM route as suggested by Henseler, Ringle and Sinkovics (2009) which is the assessment of the model of measurement and evaluation of the structure model. Therefore, in order to determine the exact measurement model evaluation, two (2) procedures are performed which are the assessment measurement model and assessment structure model. Assessment of measurement model will be through four stages namely individual item reliability, Internal consistency reliability, convergent validity, discriminant validity. The study also conducted a pilot test to test the reliability of the questionnaires that have been developed.

Reliability Analysis

Pilot test is the first step before conducting a real study involving selected respondents. This test was conducted to test the reliability level of the questionnaires that have been developed. According to Majid Konting (1993) the acceptable reliability coefficient according to research in social sciences was greater than $\alpha = 0.60$, which was also agreed by Alias (1999). However, the reliability coefficient considered best is between $\alpha = 0.71$ to 0.99. Pilot test results are shown in Table 1.

Table 1
Reliability Test Results on Questionnaire Items

Variables	Items	Value α
Attitude	4	0.734
Subjektif norm	4	0.825
Perceive behaviour control	4	0.816
Tendency	4	0.901
Health claim	4	0.872

Source : IBM-SPSS

The findings show that the Cronbach Alpha coefficient for all factors is greater than 0.6. This is an indication that the items constructed in the questionnaire are acceptable and reliable.

Individual Item Reliability

Through the findings of the reliability assessment that have been done on 20 items shows that all items have a loading value of more than 0.40 between 0.597 and 0.867. This means that all items will be preserved in this study as shown in Table 2.

Jadual 2

Standardized Loading Value, composit reliability (CR) dan Average Variance Extracted (AVE)

Variable	Standardized Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Attitude (ATT)			
ATT1	0.795	0.871	0.630
ATT2	0.680		
ATT3	0.867		
ATT4	0.820		
Subjective Norm (SN)			
NS5	0.787	0.882	0.651
NS6	0.759		
NS7	0.833		
NS8	0.845		
Perceive Behaviour Control (PBC)			
PBC9	0.597	0.831	0.556
PBC10	0.743		
PBC11	0.813		
PBC12	0.810		
Health Claim (HC)			
HC13	0.757	0.882	0.651
HC14	0.826		
HC15	0.858		
HC16	0.785		
Tendency			
Niat17	0.734	0.850	0.586
Niat18	0.787		
Niat19	0.796		
Niat20	0.745		

Internal Consistency Reliability

Referring to Bijttebier et al. (2000) and Sun, Chou, Stacy and Ma (2007) state that the internal consistency reliability is the ability of an item on the sub-scale to measure the same concept. This study has chosen the coefficient of composite reliability (CR) for the certainty of the internal consistency of the study model. Table 2 shows the value of composite reliability (CR) for all variables above 0.70 which is between 0.831 and 0.882. It is concluded that the reliability of the internal consistency of the variables in this study is satisfactory as it is also supported by the rule of thumb of Hair, Ringle, & Sarstedt (2011) and Bagozzi and Yi (1998) with the value of the coefficient of composite reliability need to exceed 0.70.

Convergent Validity

According to Hair, Hult, Ringle, & Sarstedt (2014) convergence validity refers to the ability of an item to coalesce with other items in one variable. In order to do this, Fornell and Larcker (1981) suggested by evaluating the Average Variance Extracted (AVE) for each variable. Therefore, the study has assessed AVE with a value of more than 0.50 as suggested by Chin (1998) to achieve sufficient convergence validity. Based on Table 2, all variables recorded AVE values exceeding 0.50 ranging from 0.556 to 0.651. This situation clearly shows the convergence validity in this study is sufficient.

Discriminant Validity

Discrimination validity refers to the extent of the difference between the variables and the other constructs (Duarte & Raposo, 2010; Gotz et al., 2010). To evaluate the discriminant validity of this study, the study has used the value of $AVE > 0.50$ by comparing the correlation between the variables and the AVE squares as proposed by Fornell and Larcker (1981). The results of the analysis show that all the AVE square values for the five variables which are attitudes (0.794), subjective norms (0.746), behavioral control (0.807), health claims (0.867) and tendency (0.766) are exceeds the correlation value between variables. Therefore, the discriminant validity has been achieved by the study. This can be seen in Table 3.

Table 3

Correlation Value and Average Variance Extracted (AVE) Square

Variables	Attitude (ATT)	Health Claim (HC)	Tendency	Subjective Norm (SN)	Perceive Behaviour Control (PBC)
Attitude (ATT)	0.794	0	0	0	0
Health Claim (HC)	0.4981	0.867	0	0	0
Tendency	0.4454	0.6149	0.766	0	0
Subjective Norm (SN)	0.4645	0.3793	0.4771	0.746	0
Perceive Behaviour Control (PBC)	0.3812	0.2995	0.3893	0.4532	0.807

Result

Profile Distribution of Respondents

The respondents' demographic profile was analyzed based on the frequency, percentage and mean value as shown in Table 4.

Table 4

Respondent Demographic Profile (n=408)

Profile	Frequency	Percent (%)
Gender		
Male	136	33.3
Female	272	66.7
Religion		
Islam	262	64.2
Hindu	66	16.2
Cristian	58	14.2
Others	22	5.4
Age		
20-30	345	84.7
31-40	39	9.6
41 and above	24	5.9
Faculty/Field		
Science	236	57.8
Social Science	172	42.2
Year of Study		
Year 1	107	26.2
Year 2	212	52.0
Year 3	64	15.7
Year 4	25	6.1
Study		
Diploma	40	9.8
Bachelor	314	77.0
Master	30	7.4
PhD	24	5.9

Table 4 is a respondents demographic profile descriptive which shows that female students respondents are bigger than male students 272 (33.3%) and 136 (66.7%) respectively. For the four religious groups in Malaysia, the number of Muslim respondents was 262 (64.2%), followed by Hindus, Christians and others which are 66, 58 and 22 persons respectively, with 16.2 percent, 14.2 percent and 5.4 percent. Most of the respondents in this study also consisted of 345 students (84.7%) and those aged between 20 to 30. The results of the faculty feature analysis showed that 236 (57.8%) respondents were students of science followed by social sciences students 172 (42.2%). In addition, the study was dominated by 212 (52.0%) respondent from second year studies compared others. As a result of the educational level analysis, it shows that the bachelor's degree in education is the highest that is 314 people equivalent to 77.0 percent compared to other approvals. There were also 309 (75.7%) respondent who did not suffer from diseases such as gastritis, migraine, fatigue, joints, intelligence, eye or critical illness compared to those with 99 (24.3%) respondent.

An analysis of the total monthly expenditure made by the respondents on the functional food of dates, raisins, habbatussauda and honey (DRHH) found that expenditure in the range of RM 31 to RM 60 (45.1%) was the highest recorded expenditure as compared to other expenses. The study also found that 340 (83.3%) respondents who took raw DRHH food. While the respondents who took the DRHH meal mixed, it recorded the highest number which is 345 (84.6%) respondent. However, both did not show a significant difference between those who took KKH food raw or mixed. While the main purpose of the respondents took the main sunnah food for the healthy body to record the highest number of 379 (92.9%) respondent, followed by the intention to restore energy as much as 328 (80.1%) respondent, thus aiming to strengthen the mind and memory of 355 (87.4%) respondent and intake aimed to increase body metabolism recorded the lowest number of 225 (55.1%) respondent. Based on the research findings, the intend of using DRHH by others respondent is to refer to the beauty aspect which is 5 (1.2%) person. The study also found that the respondents' views on the DRHH functional food products in terms of taste, quality and packaging were high at 3.86, 3.89 and 3.59 respectively. On the other hand, for the price aspect, the average mean value was 2.69.

Hypothesis Testing

Assessment of the overall structure model (Fig. 1) which includes assessing the significance of pathways of coefficients and effects of intermediate variables applied to measuring hypotheses that have been constructed. To test the degree of significance of the path of coefficients between attitude, subjective norms and perceive behavior control variables towards the tendency to use sunnah functional foods, the study has chosen the standard bootstrapping process proposed by Hair et al. (2011), Hair et al. (2014) and Henseler et al. (2009). It is shown in Figure 1.

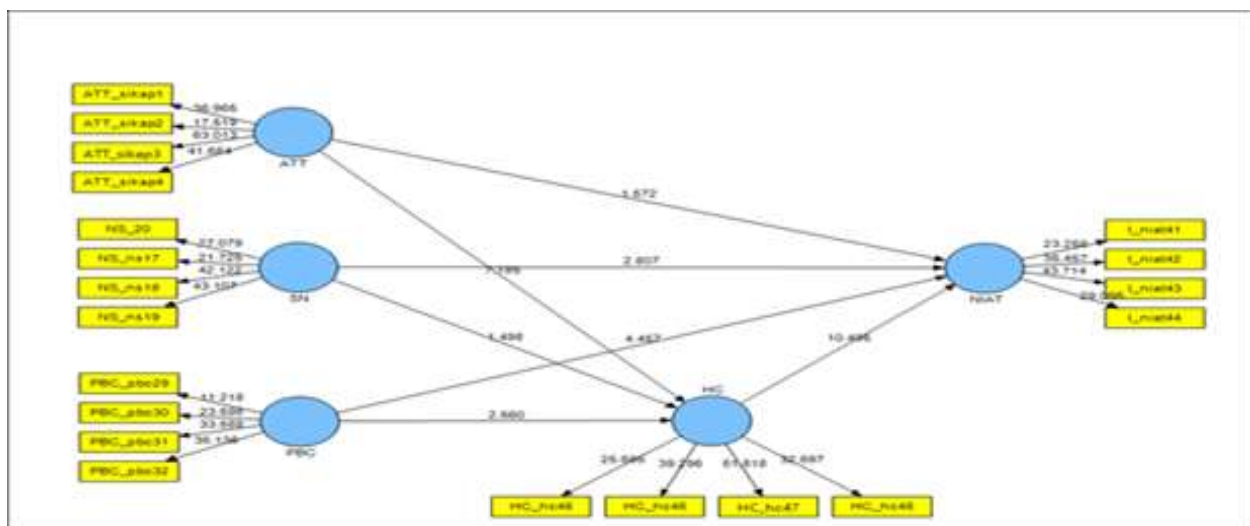


Figure 1 Result of The Path Analysis

Table 5

Summary of Path Coefficients and Hypotheses testing

Hypothesis	Relationship	Beta	T value (t-stat)	Sig Level	Supported
H ₁	ATT → Tendency	0.068	1.572	-	No
H ₂	SN → Tendency	0.129	2.807	**	Yes
H ₃	PBC → Tendency	0.212	4.457	**	Yes

Note: ** significant with 0.05 (*two-tail*)

Based on the results of the analysis, the study found that there was no significant relationship between attitude toward the tendency (β : 0.068, t: 1.572, $p > 0.05$). However, different findings were derived from the subjective norm (β : 0.129, t: 2.807, $p < 0.05$) and perceived control of behavior (β : 0.212, t: 4.457, $p < 0.05$) which are significantly.

Mediation

Intermediate tests were performed using Bootstrapping and Sobel tests. There are several methods that are often used to test intermediate variables (Hayes & Preacher, 2010) among them through causal step strategy (Baron & Kenny, 1998), distribution of product approaches (Mackinnon, Lockwood & Williams, 2004), the Sobel test of the product coefficient (Sobel, 1982) and bootstrapping (Mackinnon et al., 2004; Preacher & Hayes, 2004, 2008). Thus, the method of bootstrapping (World, 1985) and Sobel (1982) was applied to test the intermediate effects studied.

Table 6

Mediation Result by Templet for Mediation Calculation

Relationship	95% (LL)	95% (UL)	Mediation
ATT → HC → Tendency	0.12	0.24	Yes
NS → HC → Tendency	-0.02	0.09	No
PBC → HC → Tendency	0.02	0.13	Yes

There is an intermediary influence between attitude variables with tendency because there is no value of 0.00 between 0.12 (LL) and 0.24 (UL). While perceive behavior control variables also have intermediate influences with values of 0.02 (LL) and 0.13 (UL). However, different findings have been derived from subjective norm variables because there is a value of 0.00 between -0.02 (LL) and 0.09 (UL). This finding suggests that subjective norm variables are not influenced by health claims towards consumer tendency. This finding is consistent with the thought of MacKinnon, Lockwood & Williams (2004) whose intermediate effect can be detected through the value of bootstrapped confident interval which includes the lower level and the upper level between the "a" and "b" where the path "a" represents the path between attitude variables, subjective norms and perceive behavior control with intermediate variables. While the "b" path represents the pathway between intermediate variables to the intentions. Furthermore, if there is no value of 0.00 between the lower level and the upper level, it shows that the influence of the intermediate variable between the independent variable and the dependent variable and vice versa.

Table 7

Result of Sobel Calculator Test

Variables	Attitude (ATT)	Subjective Norm (SN)	Perceive Behavior Control (PBC)
t-stat	5.676**	1.483	2.579**
Mediation influence	Yes	No	Yes

Note: ** significant with 0.05 (t-stat:1.96)

Table 7 shows that attitude variables are significant (t: 5.676, $t > 1.96$), as well as supporting the hypothesis 4 studies that have foreseen health claim significantly intermediate to the relationship between attitude and tendency of using sunnah functional food. The health claim also significantly influences the relationship between perceive behavior control and the tendency ($p < 0.05$) with t-stat value which also attains a degree of significance (t: 2.579, $t > 1.96$). Accordingly, the hypothesis 6 was supported. Hair, Black, Babin & Anderson (2010) states that the presence of interstitials can be identified if the t-stat equal to or greater than 1.96 at a significant level of 0.05 using a two-tailed test or 1.64 at a significant level of 0.05 with one-tail. However, subjective norm variables show different findings. This is because the t-stat for subjective norm variables is not significant (t = 1.483, $t < 1.96$) and rejects hypothesis 5 which has predicted that health claims significantly intermediate the relationship between subjective norms with the tendency of using sunnah's functional food. This clearly shows that only attitude and subjective norms variables have the influence of health claim variable on the tendency of using sunnah's functional food.

Table 8

Result of Beta Coefficient on Attitude and Perceive Behavior Control Variables

Relationship	Attitude (ATT)	Perceive Behavior Control (PBC)
Direct relationship (Independent variable to dependent variable)	0.252	0.288
Indirect relationship (Through mediation)	0.068	0.212

According to Baron and Kenny (2009), partial mediation conditions are identified if there is a significant relationship between the both direct and indirect relationship, also the coefficient beta value decreases on indirectly relationship. While intermediary conditions are full mediation if the indirect relationship reaches significant but not significant at direct relationship between independent variable with dependent variable. It turns out that there is a partial mediation effect on both the variables.

Discussion

Based on the results obtained, the study concludes that the influence of the social environment that includes the family and important people around can be an important indicator of action and decision making to use the sunnah's functional food. The findings are consistent with Ham et al. (2015), Yazdanpanah (2015) and Shin & Hancer (2016) where there is a positive relationship between subjective norms and the use of a food product as a result of beliefs and information retrieval from immediate family members encouraging consumers to use the product. Likewise

for perceive behavior control factors found to influence the use of sunnah's functional food. According to Ajzen (2002), the ability of an individual to control an action in terms of the implication of the act is either good or bad and difficult or easy to be able to strengthen their intentions in carrying out an act. Assimilation from the perception control performed by an individual can increase their level of readiness in making choices, conducting and pursuing an act (Kim & Chung, 2011). These findings also support the study of Farhana (2014), Bai et al. (2014), Mohamed Omar, Nik Kamariah, Ahmad Imhamed and Fatihya (2012) and Haque et al. (2015) which also has a positive relationship with the use of food products. Hence the control over the actions taken by the consumer either through past experience or the ability to perform the behavior provides an important role in forming strong intentions to use a product.

However, the consumer attitude that tested in the study does not show influence on the use of sunnah's functional food. This is because negative attitudes present in an individual can be a barrier to the formation of positive behavior towards product use. According to the Addition, this finding is in line with Ajzen's theory (1991) which states the attitude factor refers to the positive or negative assessment of the individual in relation to an action where a positive attitude tends to produce positive action on the use of a product while the negative attitude is otherwise. The mediator factor of health claim demonstrates the significant influence of intermediaries between attitudes and behavior control on the tendency of using sunnah's functional food. This shows that the elements of health are important in forming a positive attitude in making a decision on the use of food. Goetzke and Spiller (2014) also point out that the attitude to practicing and preventing healthy intake of healthy food sources can make good implications for the health of the body and thereby prevent disease risk. On the other hand, knowledge and input on the benefit of taking a sunnah's functional food on the body is important in influencing consumer confidence to make choices and use.

Additionally, the health element also affects control in determining the decisions and actions that users will implement. Contrary to the results of the relationship between subjective norms with tendency to using functional sunnah food which are weaker with the existence of health claims and at the same time it shows that health claims fail to be a mediation between the two variables. This finding clearly shows that the influence around individuals such as important people, families and partners against the recommended sunnah functional food products is not influenced by the essentials and health benefits of the body. Therefore, entrepreneurs or producers are encouraged to create a campaign that can enhance the knowledge and awareness of each user, especially the community about the benefits and benefits of sunnah food. The findings and analysis of this study provide useful information to food product manufacturers to be more careful in producing a food to meet the needs of consumers in terms of health and not just based on profit goals solely. Consequently, manufacturers need to emphasize the nutritional content of the foods used in addition to the uniformity of labels that are applicable to the content in order to create a trust among consumers for the effectiveness and effectiveness of the products produced.

Acknowledgement

Funded under Research Grant by MoHE, FRGS (2016-0071-106-02)

Corresponding Author

Fidlizan Muhammad

Faculty of Management and Economic,

Universiti Pendidikan Sultan Idris,

35900 Tanjong Malim, Perak,

Malaysia.

Email Address: fidlizan@fpe.upsi.edu.my

References

- Alias, B. (1999) *Statistik penyelidikan dalam pendidikan sains sosial*. Bangi: Universiti Kebangsaan Malaysia.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British journal of social psychology*, 40(4), 471-499.
- Ajzen, I. (1991). The theory of planned behavior. *Journal of Organizational behavior and human decision processes*, 50(2), 179-211.
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32, 665–683.
- Bijttebier, P., Delva, D., Vanoost, S., Bobbaers, H., Lauwers, P., & Vertommen, H. (2000). Reliability and Validity of the Critical Care Family Needs Inventory in a Dutch-Speaking Belgian Sample. *The Journal of Critical Care*, 29(4), 278–86.
- Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94.
- Bai, L., Tang, J., Yang, Y., & Gong, S. (2014). Hygienic food handling intention. An application of the Theory of Planned Behavior in the Chinese cultural context. *Food control*, 42, 172-180.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Chaudhry, Q., Scotter, M., Blackburn, J., Ross, B., Boxall, A., Castle, L., & Watkins, R. (2008). Applications and implications of nanotechnologies for the food sector. *Food Additives and Contaminants*, 25(3), 241-258.
- Chin, W. W. (1998). The Partial Least Squares Approach to Structural Equation Modeling. In *Modern Methods for Business Research* (pp. 295–336). New Jersey: Laurence Erlbaum
- Dawes, J. (2008). Do data characteristics change according to the number of scale points use? And experiment using 5 point 7 point and 10 point scales. *International Journal of Market Research*, 50(1), 1–20.
- Duarte, P. A. O., & Raposo, M. L. B. (2010). A PLS Model to Study Brand Preference: An Application to the Mobile Phone Market. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of Partial Least Squares Concept, Methods and Applications* (pp. 449–485). Springer Berlin Heidelberg.
- Euromonitor International. (2016). Perbelanjaan makanan fungsian di Malaysia. Retrive from Mac 5, 2017, <http://www.euromonitor.com/search?txtSearch=functional+food>
- Farhana, I. (2015). *Faktor-faktor yang mempengaruhi gelagat pembelian pengguna terhadap produk halal* (Doctoral dissertation, Universiti Utara Malaysia).
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable

- Variable and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Gotz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of Structural Equation Models Using the Partial Least Squares (PLS) Approach. In V. E. Vinzi, W. W.
- Goetzke, B., Nitzko, S., & Spiller, A. (2014). Consumption of organic and functional food. A matter of well-being and health? *Appetite*, 77, 96-105.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. *Advance in International Marketing*, 20, 277–319.
- Hayes, A. F., & Preacher, K. J. (2010). Quantifying and Testing Indirect Effects in Simple Mediation Models When the Constituent Paths Are Nonlinear. *Multivariate Behavioral Research*, 45, 627–660.
- Ham, M., Jeger, M., & Ivković, F. A. (2015). The role of subjective norms in forming the intention to purchase green food. *Journal of Economic Research-Ekonomika Istraživanja*, 28(1), 738-748.
- Haque, A., Sarwar, A., Yasmin, F., Tarofder, A. K., & Hossain, M. A. (2015). Non-Muslim consumers' perception toward purchasing halal food products in Malaysia. *Journal of Islamic Marketing*, 6(1), 133-147.
- Hair, J. F. J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structure Equation Modeling (PLS-SEM)*. Sage Publications Inc.
- Hair, J. F. J., Black, W. C., Babin, B., & Anderson, R. E. (2010). *Multivariate Data Analysis A Global Perspective (Seventh Ed.)*. Prentice Hall.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152.
- Khadler, A., Faisal, A., & Monika. (2015). *Salah faham terhadap sunnah isu dan penyelesaian*, Kuala Lumpur. Akademi Pengajian Islam.
- Konting, M. (1993). *Kaedah Penyelidikan Pendidikan*, (2nd ed), Kuala Lumpur: Dewan Bahasa dan Pustaka.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39, 99-128
- Suki, M. N., & Salleh, A. S. (2016). Does Halal image strengthen consumer intention to patronize Halal stores? Some insights from Malaysia. *Journal of Islamic Marketing*, 7(1), 120-132.
- Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of Consumer Marketing*, 32(3), 167-175.
- Omar, K. M., Mat, N. K. N., Imhemed, G. A., & Ali, F. M. A. (2012). The direct effects of halal product actual purchase antecedents among the international Muslim consumers. *American Journal of Economics*, 2, 87-92.
- Patch, C. S., Tapsell, L. C., & Williams, P. G. (2005). Attitudes and intentions toward purchasing novel foods enriched with omega-3 fatty acids. *Journal of Nutrition Education and Behavior*, 37(5), 235-241.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS Procedures for Estimating Indirect Effects in Simple Mediation Models. *Behavior Research Methods, Instrument, & Computers*, 36(4), 717–731.

- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Roscoe, J. T. (1975). *Fundamental research statistics for the behavioral sciences [by] John T. Roscoe*.
- Rezai, G., Teng, P. K., Mohamed, Z., & Shamsudin, M. N. (2012). Functional food knowledge and perceptions among young consumers in Malaysia. *World Academy of Science, Engineering and Technology*, 63, 307-312.
- Salleh, H. S., Mohd Noor, N. A., Nik Mat, N. H., Yusof, Y., & Mohamed, W. N. (2015). The Consumption of Functional Food in Malaysia: Their Profiles and Behaviours. *International Business & Economic Research Journal*, 14(4), 726–734.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, 13, 290-312.
- Shin, Y. H., & Hancer, M. (2016). The role of attitude, subjective norm, perceived behavioral control, and moral norm in the intention to purchase local food products. *Journal of Foodservice Business Research*, 19(4), 338-351.
- Shah Alam, S., & Mohamed Sayuti, N. (2011). Applying the Theory of Planned Behavior (TPB) in halal food purchasing. *International Journal of Commerce and Management*, 21(1), 8-20
- Teng, C. C., & Wang, Y. M. (2015). Decisional factors driving organic food consumption: generation of consumer purchase intentions. *British Food Journal*, 117(3), 1066-1081.
- Urala, N., & Lahteenmaki, L. (2007). Consumers changing attitudes towards functional foods. *Food Quality and Preference*, 18(1), 1-12.
- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732-739.
- Wold, H. (1985). *Systems analysis by partial least squares. Measuring the unmeasurable*.
- Wibowo, M. W., & Ahmad, F. S. (2016). Non-Muslim consumers' halal food product acceptance model. *Procedia Economics and Finance*, 37, 276-283.