THE RELATIONSHIP BETWEEN WILLINGNESS TO PAY, ATTITUDE AND HEALTH KNOWLEDGE WITH INTENTION OF CONSUMING ORGANIC FOOD AMONG WORKING WOMEN IN KELANTAN

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Abstract

The research aimed to determine the relationship between willingness to pay (WTP) organic food products, attitudes of women in purchasing organic food products and health knowledge in buying organic food products with the intention of consuming organic food. A survey had been done amongst 253 working women in Kota Bharu, Kelantan, via purposive random sampling method. A self-administered bilingual questionnaire was used to collect the research data among respondents to examine their intention of consuming organic food. Pearson Correlation test was used to study the relationship between the independent variables and the dependent variable. The findings showed a significant relationship between WTP organic food products and intention to purchase organic food ($r = 0.781^{**}$, $p = 0.001$). Also, there was a significant relationship between attitudes of women in the purchase of organic food products and intention to purchase organic food ($r = 0.565^{**}$, $p = 0.001$) and a significant relationship between health knowledge in buying organic food products and intention to purchase organic food ($r = 0.776^{**}$, $p = 0.001$). In conclusion, all the variables were a significant relationship. Therefore, the sellers need to create something new about organic packaging. The more people know about organic products, the more they can believe the organic products claim. People who know more about eco-friendly advertising are more willing to purchase organic food products.

Keywords: Organic food; Willingness to purchase; Attitudes; Health knowledge; Intention

Abstrak

Tujuan kajian ini adalah untuk menganalisis hubungan antara kesanggupan membayar (WTP) produk makanan organik, sikap wanita dalam membeli produk makanan organik dan pengetahuan kesihatan dalam membeli produk makanan organik dengan niat untuk mengambil makanan organik. Tinjauan telah dilakukan

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*terhadap 253 wanita yang bekerja di Kota Bharu, Kelantan melalui kaedah pensampelan rawak bertujuan. Soal selidik dwibahasa yang dikendalikan sendiri digunakan untuk mengumpul data penyelidikan dalam kalangan responden untuk meneliti niat mereka untuk mengambil makanan organik. Data yang diperoleh dianalisis menggunakan perisian SPSS versi 23. Ujian Korelasi Pearson digunakan untuk mengkaji hubungan antara pemboleh ubah tidak bersandar dengan pemboleh ubah bersandar. Hasil kajian menunjukkan bahawa terdapat perhubungan yang signifikan antara kesanggupan membayar produk makanan organik dan niat untuk membeli makanan organik (r = 0.781**, p = 0.001). Juga, terdapat perhubungan yang signifikan antara sikap wanita dalam pembelian produk makanan organik dan niat untuk membeli makanan organik (r = 0.565**, p = 0,001), perhubungan yang signifikan antara pengetahuan kesihatan dalam membeli produk makanan organik dan niat untuk membeli makanan organik (r = 0.776**, p = 0.001). Kesimpulannya, kesemua pemboleh ubah mempunyai hubungan yang signifikan. Oleh itu, penjual perlu membuat sesuatu yang baru mengenai pembungkusan organik yang dapat difahami kerana semakin banyak orang mendapat produk pengetahuan tentang produk organik maka mereka lebih mempercayai tuntutan produk organik dan ramai mempunyai lebih banyak pengetahuan mengenai pengiklanan mesra alam lebih bersedia untuk membeli produk makanan organik.*

Kata kunci: Makanan organik; Kesanggupan membayar; Sikap; Pengetahuan kesihatan; Niat

Introduction

The rising interest in foods grown organically is gaining attention in developed and developing countries (Chander *et al*., 2011; Eyinade *et al*., 2021; Mie *et al*., 2017; Nguyen *et al.,* 2019; Wang *et al*., 2019). The term “organic” refers to the process of how certain foods are produced. Organic foods have been grown or farmed without artificial chemicals, hormones, antibiotics or genetically modified organisms. In order to be labelled organic, a food product must be free of artificial food additives (Brown, 2016), which includes artificial sweeteners, preservatives, colouring, flavouring and monosodium glutamate (MSG). Organically grown crops tend to use natural fertilizers like manure to improve plant growth. Animals raised organically are also not given antibiotics or hormones. Organic farming tends to improve soil quality and the conservation of groundwater. It also reduces pollution and may be better for the environment (Brown, 2016). The most commonly purchased organic foods are fruits, vegetables, grains, dairy products and meat. Nowadays, many processed organic products are available, such as sodas, cookies, and breakfast cereals.

Intention to purchase a product can be considered the best predictor of actual behaviour (Ajzen, 1991). Attitude towards the behaviour influences the consumer’s intention to purchase the product. The belief about the behaviour and all the

consequences of the behaviour has affected the perceived attitude towards the product. Attitude determines final decisions in the consumers buying behaviour. Hence, based on the importance of attitude in consumer buying decisions, a conceptual framework is evolved. For example, Denmark's consumption of organic food had a boom in the nineties when a significant supermarket chain began to use an organic image as a marketing strategy and increased the supply and visibility of organic products. Today, a wide variety of organic products is available in most supermarkets and discount stores at relatively low price premiums.

Kapuge (2016) reported that organic foods had been perceived as a special value in the eyes of consumers. This is because organic food products do not contain genetically modified materials to reach a sustainable agriculture system. When consumers enter the farmers market, consumers will be greeted with signs labelled Certified Organic in bold. Although much more expensive than its inorganic counterparts, organic farming has become the most popular type of alternative farming in the United States and globally. However, in Malaysia, it is still not used as widespread alternative agriculture. Many consumers know the importance, but consumers still do not know whether this organic food is healthier than regular food. Therefore, the research aimed to determine the relationship between willingness to pay for organic food products, women's attitudes in purchasing organic food products, and health knowledge in buying organic food products to consume organic food.

Background of the Study

Malaysia's local organic food industry is still small, as more than 60% of organic food products are imported. Most of the organic products are sold domestically, while some are exported to Singapore. Consumer perception of the price and availability may also alter one’s choices regarding the amount to consume and its corresponding usage likelihood. This is relevant for organic food prices as it is generally more expensive compared to conventional products. Foster (2005) reported that price is an essential attribute to a consumer is of vital concern, as organic buyers significantly price sensitive. Higher price tags and doubt about the genuineness of organic certification were the prime barriers to the purchase behaviour of organic food consumers.

The higher frequency of consuming organic products leads to higher WTP. Most of all, people concerned about their health and the environment are willing to pay more for organic products (Suanmali, 2020). In the United States, shoppers are still paying more for organic food, but the price premium falls as organic options multiply. Organic food and beverages cost an average of 24 cents more per unit than conventional food or about 7.5 percent more. That was down from the year 2014. Thogersen (2014) ascertained from several studies that consumers' attitude towards organic food is favourable, with typically associated benefits being superior taste, more

environmental-friendliness, improved health, safer food, and more animal welfare. On the other hand, a frequently reported reason for not buying organic food was price since it was usually premium-priced (Marian *et al*., 2014).

Nowadays, consumers tend to purchase high-quality food for their life. It consists of two important dimensions for quality foods, including food safety and sustainability (Ueasangkomsate & Santiteerakul, 2016). Due to interest in product response to food safety, human health concerns, animal welfare considerations and environmental concerns are growing progressively. Green or organic food with fewer chemical residuals has become more popular across the world. High awareness of safe food refers to hazard-free, green and organic food and willingness to pay more for a safe food product. In Malaysia, consumers are more likely to have positive attitudes toward green food when they are more concerned about environmental issues and health consciousness. The majority of Malaysians consider food safety and health issue for buying green food as primary reasons. It presented consumers' perception of safety, health, environmental factors, and animal welfare influencing intention to purchase organic food significantly (Sangkumchaliang & Huang, 2016). These findings reveal that consumers who purchase organic food in the northern region are healthier and expect environmental friendliness. Although the demand for organic food is growing, the supply of local organic products is not keeping up with the increased demand. Intention to purchase a product can be considered the best predictor of actual behaviour (Ajzen, 1991). Attitude towards the behaviour influences the consumer's intention to purchase the product. The belief about the behaviour and all the consequences of the behaviour has affected the perceived attitude towards the product. Attitude determines final decisions in the consumers buying behaviour.

Lifestyle changes and increasing health awareness have resulted in an emerging trend toward healthy food consumption. Organic food products, defined as "green products" (produced in an environmentally friendly manner), as safer products (produced with fewer herbicides and pesticides), or as generally more wholesome and nutritious products, are gaining immense popularity worldwide (Jolly, 1996). Prior studies have emphasized the relevance of education or schooling on health-food consumption, albeit with contrasting results. It is generally accepted that individuals with higher education are more likely to consume healthier food since they are more knowledgeable and have a greater awareness of wellbeing (Cranfield & Magnusson 2003). Organic food is now a regular feature at most supermarkets, which has created a bit of a dilemma in the produce aisle. Another safety concern that has been raised about organic food is the issue of manure fertilizers. Some critics fear that using manure to fertilize organic crops might increase contamination by dangerous microbes like E. coli. Klurfeld (2015) stated that "The organic farmers talk about the soil being more fertilized on organic farms than conventional farms, and that life is not just insects and worms. It is loaded with bacteria," But organic production standards do include strict rules on the composting and application of manure, and there is little

evidence that organic food has bacterial contamination more often than conventional food. Health consciousness lifestyle was the foremost motivating factor of organic food purchase and willingness to pay.

Methodology

A total of 253 questionnaires were distributed via purposive random sampling method amongst working women who had intentions of organic food consumption in Kota Bharu, Kelantan. The reason is that Kelantan is an agrarian state with green rice fields and rural fishing villages. Kelantan is home to several ancient archaeological discoveries in Malaysia, including several prehistoric settlements. There are full and rich in natural organic goods. The target population in this study were amongst all women who have had a career in various sectors such as the government, private, self-employed or entrepreneurs. The target sample of this research was the existing organic consumers instead of potential customers.

There are five (5) sections in the questionnaire. Part A covers the respondents' socioeconomic background, age, ethnicity, education, number of households, employment sector, and monthly household income. Respondents were only able to select one answer related to their background. Measurement scale used nominal scale. Part B is an intention to purchase organic food products. Part C also aspects of willingness to purchase organic food products. Next, part D the attitudes of women in the purchase of organic food products. Finally, section E is Health knowledge in buying organic food products. All parts except Part A use a 5-point Likert scale for the measurement of variables in which respondents require a scale change ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Face-to-face interviews through self-administered were used in this study. The time-consuming data collection took approximately one month during the non-festive season.

The data collected were analysed by using Statistical Package for the Social Sciences (SPSS) Version 23. Descriptive analysis was performed to describe the respondent’s background, while Pearson correlation coefficient analyses were applied to determine the relationship between independent and dependent variables.

Results and Discussion

Respondent’s background

Based on Table 1, this is regarding the seven demographic questions like age, race, educational background, working sector and household income per month. The result shows that the age of the respondents ranges from 41-50 years old (35.4%), followed by ages 21-30 (28.6%), ages 31-40 (23.1%). The majority of the respondents are

Malay (81.8%). With respect to educational background, more than half are undergraduate level (53.4%), SPM (19.0%), diploma (14.2%), STPM/Matriculation/Certificate holders (9.2%), and others (4.4%). In terms of the working sector, the government sector (39.1%), followed by business or self-employed (37.2%) and private sector (23.7%). More than half of the respondents earn a monthly income below RM 4,850 or among the Bottom 40 (B40) (53.4%).

Table 1: Respondent's Background

Variables	N	Percentage (%)
Age (years old)		
≤ 20	4	1.6
21-30	72	28.6
31-40	63	23.1
41-50	86	35.5
51-60	23	9.2
61-70	4	1.6
71-80	1	0.4
Race		
Malay/Bumiputera	207	81.8
Indian	24	9.5
Chinese	22	8.7
Level of Education		
Sijil Pelajaran Malaysia (SPM)	48	19.0
STPM/Matriculation/Certificate	23	9.1
Diploma	36	14.2
Degree	135	53.4
Master	9	3.6
PhD	2	0.8
Working Sector		
Government	99	39.1
Private Sector	60	23.7
Business/self-employed	94	37.2
Household income (monthly)*		
Less than RM4,850.00 (B40)	135	53.4
RM4,850.00 - RM10,959.00 (M40)	96	37.9
RM10,960 and above (T20)	22	8.7

* Monthly Income Classification 2019 by Department of Statistics Malaysia.

Main findings

Intention to purchase organic food products

The results show the two highest mean values (4.40) derived from the question "I believe organic food can make the body healthier and fresher." This shows that

consumers are confident to buy organic products continuously because these organic foods can keep the consumer's body healthy. The second highest mean value indicates that organic food does not contain harmful substances (4.37). Followed by health consciousness that positively influences consumer purchase intention (4.33), a positive personal attitude is the intention to buy one's organic food. Users are willing to provide healthy and balanced food (4.30) because, according to consumers, the quality of food freshness comes from organic food. The lowest mean value (4.10) comes from the statement "I aspire to be healthy by eating organic food", where consumers still do not desire to eat organic food for their excellent health.

Table 2: Mean Values for Intention to Purchase Organic Food Products

No.	Statement	Mean	Standard Deviation
1.	I once intended to make purchases of organic food products in the market.	4.13	0.730
2.	I aspire to be healthy by eating organic food.	4.10	0.845
3.	I intend to prioritize a balanced diet for the family.	4.13	0.900
4.	I am concerned about my health and I will control my intention to take more organic food.	4.13	0.900
5.	The freshness of the food provided must be healthy and balanced.	4.30	0.794
6.	I will buy the food for my health.	4.13	0.730
7.	I believe organic food can make the body healthier and fresher.	4.40	0.724
8.	I would buy organic food because it does not contain harmful substances.	4.37	0.890
9.	Positive personal attitude is the intention to buy one's organic food.	4.30	0.702
10.	Health consciousness has positive influence on consumer purchase intention.	4.33	0.661

Willingness to pay for organic food products

For the willingness to pay for organic food products, there are two highest mean values (4.30) are from the statement "I do food product comparisons prices before making a purchase" dan "I am willing to buy organic food if it is available and reasonably priced according to my ability". It shows that the majority of respondents argue that prices should be compared first before making a purchase. At the same time, the consumer will be willing to buy if the price placed is reasonable with the consumer's ability. The second highest mean value (4.23) indicates that the respondents know that if the organic food is expensive, they will buy it to maintain personal and family health. Some consumers view the price of eco-friendly products as more expensive than conventional (Chang, 2011). The benefits of the products

make some of the consumers go extra to pay more for the products. The third highest mean value (4.17) from the statement "I plan to buy organic food because it is for health purposes". Followed by "I intend to buy organic food to alleviate the disease problems facing" with mean value (4.10), "I read the important nutritional content before I make a purchase decision", "I will buy organic food to develop the organic farming sector in Malaysia" and "I will still buy organic food referring to the level of income I have" with mean value (4.00) respectively. Suanmali (2020) found that green behaviours and frequency of reading nutritional labels have relatively the same positive impacts on WTP. The two lowest mean values were "I have bought organic food products several times" with a mean value (3.97) and "I buy food products according to my own wishes" with a mean value (3.87).

Table 3: Mean Values for willingness to Pay for Organic Food Products

No.	Statement	Mean	Standard Deviation
1.	I do food product comparisons prices before making a purchase.	4.30	0.915
2.	I buy food products according to my own wishes.	3.87	0.860
3.	I read the important nutritional content before I make a purchase decision.	4.00	0.910
4.	I am willing to buy organic food if it is available and reasonably priced according to my ability.	4.30	0.702
5.	I have bought organic food products several times.	3.97	0.809
6.	I intend to buy organic food to alleviate the disease problems facing.	4.10	0.607
7.	I will buy organic food to develop the organic farming sector in Malaysia.	4.00	0.830
8.	I plan to buy organic food because it is for health purposes.	4.17	0.699
9.	I will still buy organic food referring to the level of income I have.	4.00	0.788
10.	Although organic food is expensive, I will buy it for my health and my family's health.	4.23	0.858

Attitudes of women in the purchase of organic food products

By analysing the mean attitude of women in purchasing organic food products, the highest mean value (4.47) shows that consumers adopt the attitude of eating organic food such as fruits and vegetables. This value indicates that this statement is the most influential statement among other questions. Ueasangkomsate and Santiteerakul (2016) found that the highest mean value was related to health. This explains that most of the consumers realized organic foods related to health. The second highest mean value (4.37) refers to "I will read the label displayed first before I pay for the organic food". Followed by "I try to make the most perfect and best

choice in decision making" with a mean value (4.27), and "I like to buy the best-selling brand of organic food products in the market" with a mean value (4.00). On the other hand, the least mean value (3.80) was from the statement, "For me, a brand that is often advertised is a good choice for consumers", which may mean that the brand that is always advertised will get consumer response and be a wise choice for consumers to eat food organic from the brand.

Table 4: Mean Values for Attitudes of Women in the Purchase of Organic Food Products

No.	Statement	Mean	Standard Deviation
1.	I adopt an attitude of eating organic foods such as fruits and vegetables.	4.47	0.730
2.	I have a favorite brand and will faithfully buy such food product brands.	3.97	0.718
3.	For me, a brand that is often advertised is a good choice for consumers.	3.80	1.064
4.	I like to buy the best-selling brand of organic food products in the market.	4.00	0.983
5.	I try to make the most perfect and best choice in decision making.	4.27	0.868
6.	I am willing to make an expensive purchase to eat organic food.	3.87	0.681
7.	I have plans to continue spending organic food on families.	3.93	0.828
8.	I think the first product I bought was organic food even though it was expensive.	3.70	0.837
9.	I will buy because I think the price is reasonable with the quality produced.	3.83	0.747
10.	I will read the label displayed first before I pay for the organic food.	4.37	0.556

Health knowledge in buying organic food products

The most significant mean value (4.33) for health knowledge in buying organic food products is the statement "Knowledge positively moderates the relationship among personal attitude and purchase intention" and "Organic food products are good for health and guaranteed." This shows that consumers are very modest positive knowledge to buy organic food. This is followed by the statement of the second highest mean value (4.30) was "Health consciousness has a significant positive influence on consumer purchase intention" and "I know the knowledge related to the importance of health in purchasing organic food products". Followed by Organic food that is chemical-free with a mean value of 4.20, "Most friends whose opinions regarding diet are important to me think that I should buy organic food" and "Organic food products contain no preservatives or artificial colour". Meanwhile, the second

last lowest mean value, 4.03, was “The production and processing of organic food are strictly controlled for the benefit of consumers”. Finally, the lowest mean value, 4.00, was “Organic food is high quality and has nutritional value”.

Table 5: Mean Values for Health Knowledge in Buying Organic Food Products

No.	Statement	Mean	Standard Deviation
1.	Health consciousness has a significant positive influence on consumer purchase intention.	4.30	0.837
2.	Knowledge positively moderates the relationship among personal attitude and purchase intention.	4.33	0.711
3.	Most friends whose opinions regarding diet are important to me think that I should buy organic food.	4.13	0.819
4.	Organic foods are chemical free.	4.20	0.664
5.	Organic food products are good for health and guaranteed.	4.33	0.606
6.	Organic foods are high quality and have high nutritional value.	4.00	1.083
7.	I know the knowledge related to the importance of health in purchasing organic food products.	4.30	0.651
8.	Knowledge positively moderates the relationship among health consciousness and purchase intention.	4.13	0.819
9.	Organic food products contain no preservatives or artificial color.	4.13	0.730
10.	The production and processing of organic food is strictly controlled for the benefit of consumers.	4.03	0.850

Correlation analysis

Based on Table 6, Pearson’s correlation coefficient measures the strength of a linear relationship between two variables. The first correlation is between willingness to pay for organic food products and the highly correlated intention of consuming organic foods (r = 0.781). This value represents that there is a strong relationship between these two variables. Siddique *et al.* (2019) found that the WTP positively impact the intention of consuming organic foods. Then, the correlation between women's attitudes in purchasing organic foods (r= 0.565) shows a moderate relationship to consuming organic foods. The results studied by Ueasangkomsate and Santiteerakul (2016) also showed that consumers’ attitudes positively correlate to buying intention organic foods.

For the last independent variable, the correlation correlates between health knowledge in buying organic food products and the intention of consuming organic food products (r= 0.776). This proposes that these two variables have a strong relationship. Wijaya (2017) also found that knowledge had positively correlated with the purchase intention of organic foods.

Table 6: Pearson Correlation Analysis

Variable	R-value	p-value
Willingness to purchase organic food products.	0.781**	0.001
Attitudes of women in the purchase of organic food products.	0.565**	0.001
Health knowledge in buying organic food products.	0.776**	0.001

Note: ** Significant at level $p \leq 0.01$

Conclusion and Implications

In conclusion, all three independent variables, including willingness to purchase organic food, attitudes of women in purchasing organic food, and health knowledge in buying organic food, had a significant positive on the intention of consuming organic food products. It shows that working women in Kota Bharu, Kelantan are more concerned with their environmental circumstances, wellbeing, ability to pay, and health knowledge of organic food.

Therefore, the study sellers, retailers, and marketers should maintain eco-friendly promotion campaigns and develop more organic displays in supermarkets. Meanwhile, managers need to create something new about organic packaging. The more people know about organic products, the more they can believe the organic products claims, and people who know more about eco-friendly advertising are more willing to purchase organic food products.

Limitation of Study

There are some limitations encountered in this study. Firstly, an important limitation of this study is that the sample was collected only in the Kota Bharu area. Consumers who hold the title of working women are less than researchers looking for instant use of organic food. Next, these organic food products are commonly found in cities and suburban areas in Kelantan. Therefore, the concentration of sample collection in Kota Bharu may not be sufficient in producing a complete picture that reflects the entire population of female consumers who eat organic food in Kelantan. Female consumers who eat organic food from other areas or the suburbs may demonstrate perceived control attitudes and behaviors intention to buy, different from working women consumers living in urban areas. As a result, the generalization of the findings to a broader population throughout the state of Kelantan must be made with caution. Bias response from respondents can be expected as consumers with different backgrounds can answer questions differently. Some working women respondents are consumers of these organic foods, but some are not. Therefore, the assessment made by the respondents may not occur precisely because of the different levels of understanding of the problem. Next, this study was conducted using self-administered questionnaires. Therefore, the evaluation by the respondents on the question in the

questionnaire is still unknown. Respondents can evaluate questions inaccurate due to the gaps or misunderstandings between respondents' understandings and concepts measured by the question. On the other hand, respondents' honesty in answering current survey questions was temporarily made, which could lead to constraints in this study. Furthermore, this study was conducted when the Covid-19 pandemic was still under control and safe to conduct the study.

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