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FOOD CHOICE MOTIVES, OVERALL ATTITUDES AND PURCHASE INTENTIONS TOWARDS FRESH FABRICATED BEEF AT KUALA TERENGGANU

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ABSTRACT

Fabricated beef was known as a famous ingredient among the community in Kuala Terengganu and there was a few characteristic were chosen when purchasing it. This research is aimed to study consumers' food choice motives, overall attitude and purchase intention toward fabricating beef meat. The consumer should know the consequences when consumes meat with lack of quality such as the high amount of fat content, non-desired sensory appeal, unknown origin and cost value of the meat plus the consumer also able to identify the part of fabricated beef that give different tenderness to the meat. Less information leads to the difficulty in choosing the best quality of beef in the marketplace. Random sampling and convenience sampling techniques were employed in this survey. Data was collected from 150 respondents through survey. The outcome demonstrates that most of the consumers suffered a positive perception towards food choice motives for fabricating beef. Overall attitudes of consumers purchase fabricated beef when their elemental needs and wants for quality, accessibility, convenience and affordability were met. Intention to purchase the fabricated beef gave positive impact for the future decision making when encounter the same item, especially when the quality equaled the value price.

Key words: Fabricated beef, food choice motive, overall attitude, purchase intention

INTRODUCTION

The growth of Malaysians' per capita income has generally empowered consumers to have more extensive selections of food, greater purchasing power and as they become more health conscious. The food consumption pattern also diverse from carbohydrates to proteins such as beef, poultry and mutton. Due to that consumption pattern, it is important for consumer to know the effects of taking a low quality of beef such as high amount of fat content, non-desired sensory appeal, hard tenderness and unknown origin of the beef. Today, most of the consumers tolerate in terms of beef quality as long as they can get a cheaper prize for that items especially during festive season. Beef is normally imported from USA, Australia, New Zealand and buffalo meat from India. However, fresh beef is produced locally. It is important to have a

sustainable supply of beef in the country to meet the current and future needs.

The current societies in East Malaysia is structured by three major ethnic groups which are Malay, Chinese and Indian. Therefore, the food culture also different for those ethnic and the demand of beef differ between them. Consumers have difficulties in choosing a good quality of beef and lacking of certain information such as origin, nutrient, age, safety and so on. Due to this, it is important to identify the major factor that bring impact to consumer behaviour, as well as defining the relative importance of these factors to increase consumer demand for beef through product differentiation when developing marketing or branding strategies (Realini *et al.*, 2014).

In certain community, beef is assumed as one of the expensive and valuable dishes due to the price and availability of the beef compare to poultry. Economic status of the family determine the type of protein source that they will purchased. Hence, this makes that beef is not chosen as a regular

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protein intake. The villager assumes that beef is an exclusive meal. Therefore, beef always served during an occasion event such as wedding ceremony, *Hari Raya* celebration and family gathering.

In year 2014, Realini *et al.* studied the importance of some main attributes of beef such as an origin, animal diet, visible fat content, beef colour and price. Stolz *et al.* (2011) reported that the most important attitudinal choice factors include health concerns, environmental concerns, taste preferences and preferred origin of food. Beef consumers are demanding for experience quality that matches their expectations, particularly with respect to beef tenderness. A quality grade is a composite evaluation of factors that affect palatability of meat (tenderness, juiciness, and flavour). This subject will bring benefits to the traditional retailer that involve in meat business which were located in wet markets and supermarket so that they can deliver an understanding regarding the consumer perceptions of price, quality and value which later, determine their purchase intention. The factors identified were the perceptions of freshness, Halal assurance, having good relationships with retailers, good quality beef, competitive price, convenience, varieties of products to choose which provided a good and pleasant environment for shoppers. In addition, Honkanen & Frewer (2009) found that knowledge about food choice motives can be bestowed to a successful design of promotional campaigns. Verbeke *et al.* (2010) stated that guaranteeing consistent eating quality which is not only increased consumers' satisfaction with beef products, but it could also lead to higher consumption rates and industry profitability. Currently, in our knowledge there is an un-adequate data available in consumers perception towards fabricated beef sold in Malaysia in order to ensure that they have a sustainable knowledge in making food choice.

MATERIALS AND METHODS

The consumers in Kuala Terengganu were selected as a respondents in this study. A close-ended questionnaire form has been developed to collect the data that consist of four parts. The questionnaire was divided into four sections, namely Section A (Food Choice Motives), Section B (Overall Attitude), Section C (Purchase Intention) and Section D (Demographic profile) based on Griskevicius & Kenrick, (2013). The first section content seven elements of food choice motives, while the second section consists questions about perceived value,

Table 1. Correlation strength based on Guilford's law

Correlation (r)	Strength of relationship
< 0.2	Negligible relationship
0.2 – 0.4	Low relationship
0.4 – 0.7	Moderate relationship
0.7 – 0.9	High relationship
> 0.9	Very high

perceived quality and price consciousness. Then, the third section contents the question about purchase intention. All sections used seven (7) continuous scales. Therefore, descriptive analysis was the most suitable analysis that can be used to interpret the data. Correlation was used to indicate the relationship among all variables that were measured on an interval or ratio level. In this research, correlation was used to study the relationship between food choice motive, overall attitude and purchase intention. Other than that, Independent T-test and One-way ANOVA also used to compare the mean score between socio-demographic with food choice motive, overall attitude and purchase intention. Table 1 showed the Guilford Rule of Thumb used for analysis the correlation statistic.

Guilford rule of thumb was used to identify the strength of the relationship between the variables. If the strength of the relationship is high, it means that particular element is significantly influenced overall attitude and purchase intention toward fabricating beef. These indicators used in determining the results produced from correlation statistic. For the inferential statistics, correlation was used widely in this study and it is used to get the *p* value. The *p* value was used to interpret whether the null hypothesis should be accepted or rejected. If the *p* value is small or less than 0.05, the null hypothesis is rejected and accept that the sample are truly different with regard to the outcome. Therefore, it can be concluded that there is a relationship between two variables. If the *p* value is larger or more than 0.05, the null hypothesis will be accepted and conclude that the treatment or the predictor variable had no effect on the outcome. As a result, there was no relationship between two variables.

To qualify the participation, consumer must be the consumer of fabricated beef which is targeted of 150 respondents. The procedure began with an explanation of the questionnaire to the respondents and the objectives of the study. Respondents answered each question in the questionnaire in the given time. Then, the questionnaire that was completed answered by respondents was collected. The data collected from the questionnaire were analysed by using SPSS v20.00.

RESULTS AND DISCUSSION

Demographic profiles

A major number of respondents were youth aged between 19-25 years old (57.7%). The most education level received by the respondent is tertiary education (38.7%). The data clearly show that the Malays were the majority respondents with 82%. Meanwhile, other respondents, including Chinese, Indian and other races which are accounted for 9.5%, 2.7% and 5.3% respectively. The findings indicate that out of 150 respondents, 52.7% male respondents has a particularly strong influence on meat consumption compare to female, 47.3% intake of meat.

Food choice motives towards fabricated beef

The attributes contributes towards fabricated beef food choice motive showed in Table 2. Any attribute which signifies above 4, signified a positive perception while below 4 signifies a negative perception and equal to 4 is neutral. All the attributes have an average score of 4 and this indicated that respondents had a positive perception towards these attributes of food choice motives for fabricated beef. The three highest attribute of food choice motives include visible fat (5.20), familiarity (4.86), and cost (4.71). The three lowest attributes were sensory (4.58), economic status (4.56) and origin (4.47).

Based on the result reported in Table 2, respondents had the highest perception towards visible fat factor and lowest perception in the origin factor of food choice. This finding was supported by Realini *et al.* (2014) which were, according to the consumers' responses the fat content of beef was the most important attribute, followed by beef price, then beef origin and colour, and finally animal diet which was not considered important. Visible fat factor accounted for highest perception indicated that consumer aware about the precautions of the role of fat in daily meal. This is because red meat and processed meat consumption have been associated with a number of unfavourable health conditions, such cancers and diabetes (Realini *et al.*, 2014). Origin of the beef was accounted for the least perception because among the different types of information that consumers received, the country of origin of the product is an extrinsic cue that has usually a great influence on their purchase decision (Font i Furnols *et al.*, 2011). Other factors such as familiarity, cost and health factor also had the high perception. This indicated the respondents expect the fabricated beef is familiar food among consumer and it have health benefits along with the affordable price.

Overall attitudes toward fabricated beef

The attributes contribution of overall attitudes toward fabricated beef showed in Table 3.

Respondents had the highest perception of perceiving value for overall attitude for fabricated beef, which was (5.67) while the other two also have positive perceptions which were perceived quality (5.58) and price conciseness (4.90). This means that respondents perceived the value, quality and aware about price consciences in overall attitude toward fabricated beef. Grunert *et al.* (2004) reported about trends in consumer attitudes and lifestyles with regard to meat consumption. One of the trends identified is the increasing importance of extrinsic cues in the consumers' quality perception of meat. This increased interest at the consumer level was linked to two developments: increasing awareness of the link between food and health, and consumers' interest in stories related to the origin and production of their food. The overall attitude of consumers towards fabricated beef have been discussed in this study and it showed consumers have a better attitude regarding perceived quality, perceive value and price. Consumer perceptions of food quality can be investigated using a multi-attribute approach. Quality perceptions are determined by consumer perceptions towards search, credence and experience attributes (Van Wezemael *et al.*, 2010). Attributes are evaluative criteria that

Table 2. Attributes contribution towards food choice motives of fabricated beef

Section A (Food Choice Motive)*	Mean	Std. Deviation
Health	4.60	1.26
Familiarity	4.86	1.25
Sensory	4.58	1.26
Cost	4.71	1.04
Visible fat	5.20	1.05
Origin	4.47	1.14
Economic status	4.56	1.14

* Descriptive Test was used; Scale (1= strongly disagree, 4= not sure while 7= strongly agree)

Table 3. Attributes contribution in term of overall attitude of fabricated beef

Attributes*	Mean	Std. Deviation
Perceived quality	5.58	0.98
Perceived value	5.67	1.13
Price conciseness	4.90	1.03

* Descriptive Test was used; Scale (1= strongly disagree, 4= not sure while 7= strongly agree)

consumers use to form beliefs and to develop attitudes (Kwun, 2011). These three factors influence each other by strongly bonding that come to final buying decision process.

Purchase intention towards fabricated beef

Consumers perceived purchase intention was in a good state of the beef (4.90 ± 1.03) as shown in Table 3. This indicated that respondents have good purchasing experience toward fabricated beef meat. This is important because positive behaviour of intention to purchase an item will help give positive impact for future decision making when encounter the same item especially when the quality matched the value of the price. According to Jaafar *et al.* (2010), experience of purchasing is easy to be shared with others and thus influences their decision.

The relationship between food choice motives with overall attitude towards fabricated beef meat

The relationship between food choice motives and overall attitude towards fabricated beef based on Spearman correlation statistic. The result shows that the correlation coefficient (r -value=0.626, significant at $p < 0.01$) (Table 4). The result showed that there was a moderate positive strength of the relationship between food choice motives and overall attitude. This indicates that increasing in food choice motives perception will increase overall consumer attitudes towards fabricated beef (Carthy *et al.*, 2003). The correlation between food choice motives and overall attitudes may happen due to the influence of the visible fat factor, familiarity, cost, health and sensory factor that being the most factors to be considered when choosing the beef.

Identifying an optimum fat level to achieve a visually acceptable marbling that does not compromise sensory quality may contribute the reduction of gap between expected and experienced quality of beef. Bright red colour was also preferred by all consumers over pale red beef. 'Price-oriented consumers' with preference for the beef with lower price represented by younger consumers, students, higher education, lower beef intake and purchase at the supermarket (Realini *et al.*, 2013). Sometimes, when evaluating food products and to make a purchasing decisions, consumers use a broad range of criteria, such as price, sensory attributes (appearance, texture, flavour and odour), health considerations, convenience, and lately also the way how a product is produced and processed, including its technological, ethical and social implications (de Barcellos *et al.*, 2010).

The relationship between overall attitudes and purchase intention toward fabricated beef

The relationship between overall attitude and purchase intention towards fabricated beef based

on Spearman correlation statistic shown in Table 5. The result showed that there was a moderate positive strength of the relationship between overall attitude and purchase intention. This indicates that increasing in overall attitude, perception will increase purchase intention towards fabricated beef meat. The correlation between overall attitude and purchase intention may develop from perceiving benefit, value and price consciousness toward the product which effect the purchase intention in the future event (Ryu, *et al.*, 2008).

Comparison of social demographic with food choice motive, overall attitude, purchase intention towards fabricated beef meat

Independent T-test and One-way ANOVA were used to compare the mean score the social demographic with food choice motive, overall attitude and purchase intention towards fabricated beef. Independent T-test were used to compare gender and race with food choice motive, overall attitude and purchase intention while the other which were age, level of education, monthly income and occupation were using One-way ANOVA (Natcha, *et al.*, 2010).

Table 6 depicts the outcome of the Independent T-test and One-way ANOVA. Independent T-test for gender show there is no significant difference ($p > 0.05$) between the score of gender with food choice motive (0.799), overall attitude (0.312) and purchase intention (0.395). This result shows that between male and female there is no significant different when choosing the food choice motive, their attitude and their intention to purchase the fabricated beef meat. This is because the assumption between those genders in choosing item was shared due to their relationship condition (husband and

Table 4. The association between food choice motives with overall attitude

Variable	n	Sig. (2-tailed)	Correlation
Food choice motive	150	0.000	0.626**
Overall attitude	150	0.000	0.626**

Test used – Spearman rank correlation test (**Correlation is significant at the 0.01 level (2-tailed)).

Table 5. The association between overall attitudes with purchase intention

Variable	n	Sig. (2-tailed)	Correlation
Food choice motive	150	0.000	0.508**
Overall attitude	150	0.000	0.508**

Test used – Spearman rank correlation test (**Correlation is significant at the 0.01 level (2-tailed)).

Table 6. The comparison of social demographic with food choice motive, overall attitude and purchase intention towards fabricated beef in Kuala Terengganu

Demographic Background		Food Choice Motives (n = 150)			Overall Attitude (n = 150)			Purchase Intention (n = 150)		
		mean±SD	df	P-value	mean±SD	df	P-value	mean±SD	df	P-value
Gender	Male	4.66±1.05	148	0.779	5.33±1.30	148	0.312	4.68±1.65	148	0.395
	Female	4.62±0.86			5.13±1.00			4.89±1.33		
Race	Malay	4.65±0.96	1,148	0.795	5.28±1.07	1,148	0.280	4.88±1.41	1,148	0.080
	Others	4.60±1.03			5.00±1.55			4.31±1.86		
Age	Young Adult	4.66±1.03	2,147	0.954	5.30±0.94	2,147	0.780	4.92±1.27	2,147	0.567
	Middle age Adult	4.62±0.97			5.18±1.23			4.66±1.57		
	Adult	4.68±0.95			5.32±1.16			4.93±1.50		
Educational level	Basic level to upper secondary level	4.71±1.10	2,147	0.630	5.30±1.11	2,147	0.537	4.75±1.42	2,147	0.754
	Lowest level tertiary	4.68±1.00			5.35±1.42			4.64±1.80		
	Degree	4.54±0.75			5.09±1.05			4.90±1.42		
Occupation	White collar	4.58±1.06	2,147	0.123	5.28±1.25	2,147	0.300	4.70±1.76	2,147	0.254
	Blue collar	4.92±0.89			5.47±0.95			5.13±1.19		
	Unemployed	4.54±0.96			5.12±1.22			4.64±1.55		
Monthly income	Low	4.61±0.97	2,147	0.506	5.14±1.20	2,147	0.496	4.60±1.56	2,147	0.227
	Moderate	4.73±1.00			5.37±1.08			5.03±1.34		
	High	4.36±0.75			5.13±1.42			4.61±1.97		

wife, brother and sister or between peer) (Cullen & Kingston, 2009).

Races were divided into two major groups which are Malay and Non-Malay. The population of Malay was more than half involved in this study while the other half was a combination of other races such as Chinese, Indian and other ethnic (*Melanau, Iban, Bajau, Bugis* etc). Independent T-test for a demographic race show that where there is no significant difference ($p>0.05$) between the score of race with food choice motive (0.795), overall attitude (0.280) and purchase intention (0.080). This indicated that between Malay and others races does not have a significant difference in term of their way of choosing and purchase the fabricated beef. This was might be because of the mixture and diffusion of multicultural races in Malaysia. Malaysia's cuisine reflects the multi-ethnic makeup of its population and is defined by its diversity (Jalis *et al.*, 2014). Many cultures from Malaysia and have greatly influenced Malaysian cuisine with strong influence from Malay, Chinese, Indian, Thai, Javanese and Sumatran cuisines. Sometimes food not found in its original culture, but it is assimilated into another; for example, Chinese restaurants in Malaysia often serve Malaysian dishes (Lee, 2017). But, even with this fusion concept of cuisine each race still maintain their own identity to their dishes (Camillo & AbKarim, 2014).

Demographic age item showed that the age group also already been regrouping into three major groups which are young adults (below 12 to 19 years old), middle age groups (25-35 years old) and adult (35- older than 45 years old). This was necessary to be done to see if they're any different in each big group and the factor causing it (Camillo & AbKarim, 2014). One-way ANOVA for age also gave no significant difference ($p>0.05$) between the score of age with food choice motive (0.954), overall attitude (0.780) and purchase intention (0.567) (Natcha *et al.*, 2010). Result show that among group age of young adult, middle age adult and adult show no difference in choosing the food choice motive, attitude and purchasing the fabricated beef.

The educational level among different group also showed no significant difference ($p>0.05$) with a food choice motive (0.630), overall attitude (0.537) and purchase intention (0.754) which were basic level to upper level secondary level, lower level to tertiary level and degree holder. Education is an important factor related in thinking and decision making (Bonfanti & Brunetti, 2014).

Types of occupation were regrouping into three classes which are a blue collar group, white collar group and unemployed. Result show no significant difference ($p>0.05$) in the score of the type of occupation with food choice motive (0.123), overall

attitude (0.300) and purchase intention (0.254). Same goes to respondents monthly income, there is also no significant difference ($p>0.05$) in the score of income per month with food choice motive (0.506), overall attitude (0.496) and purchase intention (0.227).

According to the result shown, all term of social demographic factor possessed no significant difference in mean score with food choice motive, overall attitude and purchase intention of fabricated beef. This indicated that all groups in gender, race, and age, level of education, monthly income and occupation have almost the same way of perception toward food choice motive. The way of each group make a decision on each item has no obvious difference. Between male and female, there is no significant difference and this may because now days both female and male tend to be more specific and careful in choosing food item and does not rely only to the female group.

Level education, monthly income and type of occupation also did not gave significant difference between these groups of demographic and food choice motive, overall attitude and purchase intention. When choosing and purchasing food item, most of all parties will choose the best characteristic that fit their demand. In this study, it seems that demand for all groups were having no difference and can proceed with same the perception of quality. People strive to experience pleasure, happiness, or satisfaction, and to avoid pain, sadness, or frustration (Griskevicius & Kenrick, 2013).

Comparison of cooking method in term of food choice motive toward fabricated beef it Kuala Terengganu

Figure 1 shows the frequencies of each method choose by respondents to cook the fabricated beef. 50% of respondent decide to cook the fabricated beef with both methods either dry or moist heat while 28% choose to cook their meat using moist heat methods while 22% of respondent come with dry heat methods to cook the fabricated beef.

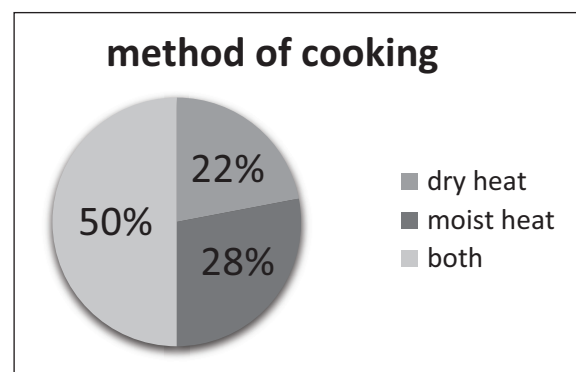


Fig. 1. The frequency of method for cooking beef according to the respondents.

Table 7. Comparison food choice motives in term of cooking method toward fabricated beef in Kuala Terengganu

Cooking method	Food Choice Motives		
	mean±SD	df	P-value
Dry heat	4.83±0.83	2,147	0.272
Moist heat	4.47±0.96		
Both	4.66±1.02		

In order to study the relation of the method of cooking and food choice motive, One-way ANOVA was used. This analysis was used to compare the mean score of method of cooking and food choice motive, whether there have significant difference or not between the method toward choosing the food choice motive of fabricated beef meat. Table 7 shows the result of analysis. According to the table, there is no significant difference ($p>0.05$) between mean scores of the different cooking method toward food choice motive (0.272). This concludes that even though the respondent's intent to apply the different cooking method to the beef, which were dry heat, moist heat or both, there is no significant difference in term of choosing the characteristic of the beef for all the methods.

CONCLUSION

Respondents had the highest perception in food choice motive was visible fat factor and lowest perception was an origin factor of fabricated beef. Meanwhile, respondents had the highest perception in attitude towards the perceived value in buying fabricated beef. However, for purchase intention, respondents had a positive perception in purchasing fabricated beef. There were a significant and positively moderate relationship between food choice motive and overall attitude. On the other hand, results showed that there were significant and positively moderate relationship between overall attitude and purchase intention toward fabricated beef. Besides that, there were no significant differences between the mean score of all social demographic with food choice motive, overall attitude and purchase intention toward fabricated beef. For cooking method, half of the respondents preferred to employ both methods which were moist and dry heat method to cook their meat and there was no substantial difference in mean score of cooking methods with food choice motive, overall attitude and purchase intention toward fabricated beef. In this study, we can conclude that food choice motives, overall attitudes and purchase intentions playing an important roles in decision making towards fresh fabricated beef. An excellent

knowledge in food products especially fresh fabricated beef may help them to sustain a good protein intake and ensure their healthy lifestyle.

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