# Fast Food Consumption Behaviour Among School Of Quantitative Science (SQS) Students In Universiti Utara Malaysia.

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**Abstract**

Fast food is one type of food that can be prepared in a short time and sells to customers at an affordable price. Although fast food is popular lifestyle nowadays and economically, fast food is generally considered as an unhealthy food due to containing high calorie, saturated fat, sugar and salt which causing obesity disease in Malaysia increases. Therefore, this research is conducted to examine fast food consumption behaviour among SQS students in Universiti Utara Malaysia. The sample for this research is 265 students that selected from three courses (Industrial Statistics, Decision Science and Business Mathematics) in SQS. Statistical analysis was carried out with SPSS using t-test, Analysis of Variance (ANOVA), Pearson's correlation and multiple linear regression. There are no significant difference of fast food consumption behaviour between gender (p-value=0.971) as well as between ethnics (p-value=0.148). Out of four factors (personal lifestyle, price quality inference, health issue and promotion attractiveness), only price quality inference (r=0.246) are statistically significant towards the fast food consumption behaviour with p-value of 0.069 at 90% significance level. In addition, for one unit increases in price quality inference, fast food consumption will be increased by 27.9% by holding others variables constants. As for conclusion, only price quality inference is able to influence the fast food consumption behaviour among SQS students.

**Keywords-**

Fast food, Personal lifestyle, Price quality inference, Health issue, Promotion attractiveness.

## Introduction

Background of Study

Food is one of the basic needs to live and survive for the human. Based on hierarchy Maslow that proposed by Abraham Maslow, he develop a theory about how people pursue their needs and rank the satisfaction of various human needs [1]. The lowest level of the hierarchy is the most basic needs for human that is physiological. This including the needs for food, water and shelter. What are fast foods?' 'What foods can be categorized as fast foods? Certainly we have asked ourselves one of these questions at some point in our life. Quick, acceptable priced and is an alternative to home cooked food are the meaning of fast food [2]. Because of teenagers busy with their study and they cannot cook in their hostel, the demand of fast food supply is on the increasing trend. This study is to propose research regarding fast food consumption behaviour among SQS students in University Utara Malaysia. This research focuses to examine the relational factors (which include personal lifestyle, price-quality inference, health issue and promotion attractiveness) toward SQS students' fast food consumption behaviour.

Problem Statement

In decades, fast food industry is one of the global business and has grown speedily. Fast foods are famous among teenagers. They go to fast food restaurants twice a week on average. Based on Fournier, Tibere, Laporte & Mognard (2016) [3], the mean body mass index (BMI) in Malaysia is 23.64kg, with 9.5% of the sample being obese, and 22% overweight. Therefore, the rate of obesity and eating habits in Malaysia increases. It's extremely difficult to eat in a healthy way at a fast food restaurant. Despite some of their recent healthful offerings, the menus still tend to include foods high in fat, sugar and calories and low in fiber and nutrients.

Objectives of the Study
1. To determine the significant difference of fast food consumption behaviour between genders, as well as between ethnics.

2.	To identify the relationship between the four factors (personal lifestyle, price quality inference, health issue and promotion attractiveness) with the fast food consumption behaviours of SQS students.
3.	 To predict the fast food consumption behaviour of SQS students based on four independent factors.

## Literature Review

Fast Food Consumption Behaviour
		In this decade, fast food is an expanding international business. Malaysia is one of the potential countries to market fast food businesses. The lifestyles of Malaysians have changed as they are influenced by foreign culture as well as rapid economic development [4].

Personal Lifestyle
		By less time to prepare food, students eat fast food, which provide delivering and 24-hours business services are always appear in their menu list. University students love something that suits their taste or unique needs to show their own personalities and brand names of products is important to them [5]. Fast food restaurant offered to Malaysians from breakfast, lunch and dinner.

Price-Quality Inference
		The price and quality of a food has a great impact on fast food consumers. They are eager to be happy with what they want and buy. Consumers are clearly thinking of quality products coming from higher prices [6], as well as the thoughts of some university students in UUM.

Health Issue
		For a long life, eating healthy food and living a healthy is a very important requirement. But, nowadays, most of us more to eat fast food. Fast food consumption can cause health problems as this is closely related to high calories, saturated fats, sugar, and sodium, and body fat, weight, and body mass index increased [7].

Promotion Attractiveness
		Promotion is defined as a special offer or a part of marketing communication activities [8]. Promotion of fast food, such as advertising and in-store promotion, is an important component in fast food marketing [9].

## Methodology

		In research investigation, target population refers to all the members who meet the particular criterion specified [10]. Population are students who is studying at School of Quantitative Science (SQS) in Universiti Utara Malaysia, Sintok, Kedah. First stage is using stratified sampling and second stage is using simple random sampling. School of Quantitative Science (SQS) are divided into three courses. There are Industrial Statistics, Business Mathematics and Decision Science. Which are total population 219 students from Industrial Statistics, 250 students from Business Mathematics and 416 from Decision Science. A total sample of 276 respondents consisting of 68 students from Industrial Statistics ($n_1$), 78 students from Business Mathematics ($n_2$) and 130 students from Decision Science ($n_3$) were selected based on the following formula (Krejcie,2006) :
$$n = \frac{Npq}{(N-1)D + pq}$$
		Next, this formula is used to calculate the sample size n for each stratum:
$$n_i = \frac{N_i}{N} \times n$$

		For the second stage, use simple random sampling is to distribute the questionnaire to selected respondent. The real respondents that have been calculated before are 276 students. But, only 265 students are responded. So that 65 students from Industrial Statistics, 74 students from Business Mathematics and 126 students from Decision Science.

## Data Analysis and Findings

		This research was complete by 87 male (32.8 %) and 178 Female (67.2%) with a total of 265 of respondents. Most of them are Malay (66.4%) followed by Chinese (21.9%), Indian (10.6%) and others (1.1%).
		An independent-samples t-test was conducted to compare fast food consumption behaviour between genders among SQS students in Universiti Utara Malaysia. Table 1 shown that there is no a significant difference of fast food consumption behaviour between gender with *p-value* = 0.917 at 95% significance value. This is mean that there is no difference between male and female towards fast food consumption.

| | F | Sig. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|
| Equal variances assumed | 0.428 | 0.514 | 0.037 | 263 | **0.917** |
| Equal variances not assumed | | | 0.038 | 180.215 | 0.970 |

Table 1 Independent sample test

The table 2 shows that the output of the ANOVA analysis to see there are any significant difference of fast food consumption behaviour between ethnics (Malay, Chinese, Indian and Others). The p-value = 0.148 and this is mean there are no statistically significant difference of fast food consumption behaviour between ethnics (Malay, Chinese, Indian and Others) at 95% significance level. It can conclude that ethnics (Malay, Chinese, Indian and Others) do not give effect on fast food consumption behaviour.

| | Sum of square | df | Mean square | F | Sig. |
|---|---|---|---|---|---|
| Between ethnics | 4.995 | 3 | 1.665 | 1.798 | **0.148** |
| Within ethnics | 241.689 | 261 | 0.926 | | |
| Total | 246.684 | 264 | | | |

Table 2 Analysis of Variance (ANOVA)

Based on Table 3 shows that the relationship between the four factors (personal lifestyle, price quality inference, health issue and promotion attractiveness) with the fast food consumption behaviours of SQS students. There is weakly positive relationship between personal lifestyle ($x_1$) with r = 0.217, price-quality inference ($x_2$) with r = 0.246, health issue ($x_3$) with r = 0.009 and promotion attractiveness ($x_4$) with r = 0.117 with the fast food consumption behaviours of SQS students. Personal lifestyle and price-quality inference are statistically significant towards the fast food consumption behaviour with p-value = 0 at 95% significant level. But, at 90% significance level, personal lifestyle ($x_1$) with p-value = 0, price-quality inference ($x_2$) with p-value = 0 and promotion attractiveness ($x_4$) with p-value = 0.058 are statistically significant. Only health issue ($x_3$) is not statistically significant towards the fast food consumption behaviour because the p-value more than significance level neither 95% nor 90%. Personal lifestyle, price quality inference and promotion attractiveness will use to construct multiple linear regression.

| | | y |
|---|---|---|
| **Fast food consumption behaviour (y)** | Pearson Correlation | 1 |
| | Sig. (2-tailed) | - |
| **Personal lifestyle ($x_1$)** | Pearson Correlation | 0.217 |
| | Sig. (2-tailed) | 0 |
| **Price-quality inference ($x_2$)** | Pearson Correlation | 0.246 |
| | Sig. (2-tailed) | 0 |
| **Health issue ($x_3$)** | Pearson Correlation | 0.009 |
| | Sig. (2-tailed) | 0.881 |
| **Promotion attractiveness ($x_4$)** | Pearson Correlation | 0.117 |
| | Sig. (2-tailed) | 0.058 |

Table 3 Pearson Correlation

A multiple regression was carried out to investigate whether personal lifestyle ($x_1$), price-quality inference ($x_2$) and promotion attractiveness ($x_4$) could significantly predict on the behaviour of SQS students towards fast food consumption (y). Table 4 shows the results of the regression indicated that the model explained 6.1% of the variation in fast food consumption behaviour explained by personal lifestyle ($x_1$) price-quality inference ($x_2$) and promotion attractiveness ($x_4$). The overall model was a significant predictor of the fast food consumption behaviour with p-value = 0.001 show at Table 5. Table 6 shown that the individual predictor, personal lifestyle ($x_1$) and promotion attractiveness ($x_4$) did not contribute to the model with p-value = 0.795 and p-value = 0.911 respectively at 95% significance level. It same goes to price-quality inference ($x_2$), but it statistically significant contribute to the model with p-value = 0.051 at 90% significance level.

While for one unit increase in price quality inference, fast food consumption will increase 27.9% by holding others variables constants. The final predictive model was:

Fast food consumption behaviour = 2.283 + 0.279 price-quality inference

| R | R square | Adjusted R square |
|---|---|---|
| 0.247 | 0.061 | 0.054 |

Table 4 Model summary

| Model | Sum of square | df | Mean square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 15.009 | 3 | 5.003 | 5.636 | 0.001 |
| Residual | 231.675 | 261 | 0.888 | | |
| Total | 246.684 | 264 | | | |

Table 5 Overall model

| Variables | Coefficients | Sig. |
|---|---|---|
| (Constant) | 2.283 | 0.000 |
| Personal lifestyle ($x_1$) | -0.031 | 0.809 |
| Price-quality inference ($x_2$) | 0.279 | 0.069 |
| Promotion attractiveness ($x_4$) | 0.008 | 0.911 |

Table 6 Coefficients

## Limitation of the Study

There are a lot of limitations when conducting this research project. Those problems include distributing the questionnaires and collecting the research data. In addition, due to limit of time, most of the questionnaire have been done through online survey. But, this depends on the respond of those selected respondents and several of them just ignore the questionnaire survey as this did not give any benefits to them. Finally, due to of money constraint, the scope of study only in Universiti Utara Malaysia.

## Conclusion

This study conclude that only price-quality inference was significantly related to fast food consumption behaviour according to the respondents. However, this does not mean that other variables does not give effect on fast food consumption behaviour by using others respondents. From this research, it can concluded that there are no significant difference of fast food consumption behaviour between gender (p-value=0.971) as well as between ethnics (p-value=0.148). Out of four factors (personal lifestyle, price quality inference, health issue and promotion attractiveness), only price quality inference (r=0.246) are statistically significant towards the fast food consumption behaviour with p-value of 0.069 at 90% significance level. In addition, for one unit increases in price quality inference, fast food consumption will be increased by 27.9% by holding others variables constants.

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