

CHAPTER 4

RESEARCH RESULTS

4.1 INTRODUCTION

This chapter elaborates the analysis of the data and presents the research results. This chapter begins with the response rate, followed by a description of the demographic characteristics of the respondents. The subsequent section discusses the reliability assessment of the variables in this study. Lastly, the results of the hypotheses are presented.

4.2 RESPONSE RATE

A total of 350 questionnaires were distributed by hand to the undergraduate students of the University of Malaya. Students of foundation science, master degree and PhD were excluded from the sample. Of the 350 questionnaires were distributed, 326 questionnaires were later collected back with a response rate of 93%. The number was then reduced to 300 after the data had been screened, checked and cleaned.

4.3 DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Descriptive analysis was conducted. The output for the respondents' demographic and dining profile such as age, gender, race, marital status, religion, highest education level, estimated parent's monthly income, types of restaurant which respondents visit most frequently, last visit to the fast food restaurant and frequency of visiting fast food restaurant in a month are presented in frequency and percentage in Table 4.1.

Table 4.1 Demographic Characteristics of the Respondents

Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	168	56.0
Female	132	44.0
Age Group		
18-20	92	30.7
21-23	188	62.7
24-26	19	6.3
27-29	1	0.3
Race		
Malay	150	50.0
Chinese	90	30.0
Indian	28	9.3
Others	32	10.7
Marital Status		
Single	298	99.3
Married	2	0.7
Widowed	0	0.0
Religion		
Islam	164	54.7
Buddhist	72	24.0
Christian	39	13.0
Hindu	22	7.3
Others	3	1.0
Highest Education		
STPM/HSC/Matriculation	250	83.4
Diploma	50	16.6
Parent's Monthly Income		
Below RM2,000	133	44.3
RM2,001-RM4,000	101	33.7
RM4,001-RM6,000	43	14.3
RM6,001-RM8,000	9	3.0
RM8,001-RM10,000	6	2.0
Above RM10,000	8	2.7

Table 4.1 (Continued)

Characteristics	Frequency (n)	Percentage (%)
Most Visit		
Fast Food Restaurant	75	25.0
Mamak Restaurant	48	16.0
Food Court and Cafeteria	122	40.7
Ethnic Restaurant	3	1.0
Casual Dining Restaurant	42	14.0
Fine Dining Restaurant	3	1.0
Others	7	2.3
Last Visit		
Less than a week	149	49.7
1-2 weeks ago	82	27.3
3-4 weeks ago	25	8.3
Over 4 weeks	44	14.7
Dining Frequency / Month		
0-5 times	265	88.3
6-10 times	24	8.0
11-15 times	6	6.0
More than 15 times	5	5.0

Descriptive information of the sample for this study showed that the majority of the respondents were male, making up 56% of the respondents, with the remaining 44% were female.

A majority of the respondents were between 21 and 23 years old, which accounted for 62.7%. About 30.7% of the respondents were in the age group of 18 and 20 years old and 6.3% of the respondents were between 24 and 26 years old. The remaining 0.3% of the respondents were between the age of 27 and 29 years old. Nearly all (99.3%) the respondents were still single and only 2 respondents were married.

On the ethnic distribution of the respondents, three categories were earlier identified under quota sampling method with preset percentages - 50% for Malay, 30% for

Chinese and the remaining 20% for Indian and others ethnic group such as Singh, Kadazan, Dusun and others. The distribution of the sample size is relatively reflective of the general Malaysia population and is an effort to represent the Malaysian consumers' perception towards FFRs in Malaysia. However, Indians and other ethnic groups were preset at 20% to ensure that the size of the respondents is adequate for measurement.

In terms of the education level, all the 300 respondents were undergraduate students in the University of Malaya. On the highest education level, more than half (83.3%) of the respondents held STPM/Matriculation/HCS certificate while the remaining 16.7% of the respondents held a Diploma.

Nearly half (44.3%) of the respondents' parents had a monthly income below RM2000, followed by 33.7% with monthly income between RM2001-RM4000, 14.3% with monthly income between RM4001-RM6000, 3.0% with monthly income between RM6001-RM8000, and 2.0% with monthly income between RM8001-RM10000. Only 2.7% of the respondents' parents had a monthly income more than RM10000.

As for the dining profile of respondents, 85.3% of the respondents surveyed had dined in FFRs in last month. Out of the 85.3%, 49.7% of the respondents had a last visit to FFRs less than a week while 27.3% of the respondents had visited to a FFR 1-2 weeks ago. A total of 8.3% of the respondents reported their last visit to FFRs was 3-4 weeks ago. However, 14.7% of the respondents indicated that their last visit to FFRs was more than 4 weeks ago.

Based on the results, a total of 40.7% of the respondents stated that they visited food court and cafeteria most often, followed by fast-food restaurants (25%), mamak restaurant (16%) and casual dining restaurant such as kopitiam concept restaurant (14%). Only 1% of the respondents visited ethnic restaurants and fine dining restaurants respectively. Ethnic restaurant is defined as a restaurant which serves food from other countries that an individual does not eat on a regular basis (Ha and Jang, 2010).

The majority, or 88.3% of the respondents visited a FFR between 0 and 5 times in a month, while 8% of the respondents visited FFR between 6 and 10 times in a month. Only 3.7% of the respondents visited FFR more than 10 times in a month in which 2% of the respondents visited between 11 and 15 times in a month and only 1.7% of the respondents visited more than 15 times in a month.

Generally, the respondents made up of male undergraduate students between 21-23 years old who were single and who had parents with monthly income of less than RM2000. The majority of respondents had a last visit to FFR in less than 4 weeks and visited FFR less than 5 times a month. They visited cafeteria and food court most often.

4.4 RELIABILITY ASSESSMENT

A reliability assessment was performed to assess the internal consistency validation of the five dimensions of service quality and of the variables in the research framework. All variables were tested using Cronbach's Alpha. According to Sekaran (1992), the Cronbach's Alpha is the most cited measure of reliability for a multi-item scale.

The acceptable cut-off point is 0.70 (Nunnally, 1978) and for SERVQUAL instruments, the modest reliability range is between 0.5 and 0.6 (Nunnally, 1967). Other researchers such as Smith et al. (1969) noted that the acceptable Coefficient alpha should be equal or greater than 0.5.

The results of the reliability assessment for the variables are shown in Table 4.2.

Table 4.2 Cronbach's Alpha Scores of the Variables

Variables	Cronbach's Alpha	Cronbach's Alpha (Main Reference)
Tangibles (1997)	0.747	0.86 (Lee and ulgado, 1997)
Reliability (1997)	0.755	0.86 (Lee and ulgado, 1997)
Responsiveness (1997)	0.709	0.81 (Lee and ulgado, 1997)
Assurance (1997)	0.691	0.88 (Lee and ulgado, 1997)
Empathy (1997)	0.598	0.84 (Lee and ulgado, 1997)
Food Quality	0.880	-
Perceived Value	0.828	-
Customer Satisfaction	0.780	-
Behavioural Intentions	0.857	-

The results above show that the recorded alpha value for all measured variables ranged from 0.598 to 0.880. Overall, the study found that all the alpha value for all the variables was above the cut-off point of 0.60 (Nunnally, 1967) except for 'empathy' which was 0.598. Although the reliability score for 'empathy' was below the threshold of 0.6, it was still in the minimum acceptable level of reliability as

suggested by Smith et al. (1969). Therefore the results show that each construct exceeded the minimum acceptable level of reliability and had ensured adequate internal consistency (Nunnally, 1967).

The five dimensions of service quality were adapted from the study by Lee and Ulgado (1997) used in Korean FFRs. In that particular study, the alpha values reported were tangible (0.86), reliability (0.86), responsiveness (0.81), assurance (0.88) and empathy (0.84). Therefore, it can be concluded that all the alpha values in the present study are lower when compared to those of the study by Lee and Ulgado (1997). The difference of the alpha values might be influenced by the cultural factors (Qin and Prybutok, 2009).

However, the results for food quality, perceived value, customer satisfaction and behavioural intentions are incomparable with the previous studies since the measuring items for these constructs were taken from various sources.

4.5 HYPOTHESES TESTING

The hypothesised relationships in this study were analysed using Pearson correlation and Hierarchical Multiple Regression.

4.5.1 Pearson Correlation

Pearson correlation is a technique used to describe the strength and direction of the linear relationship between each of the independent variables and the dependent variable (Pallant, 2001). This study used Cohen's (1992) as a benchmark in interpreting the findings. According to Cohen (1992), a correlation coefficient

between 0.10 and 0.29 indicates a weak correlation, between 0.30 and 0.49 indicates a medium correlation and between 0.50 and 1.0 indicates a strong correlation.

In this study, Pearson correlation analysis was performed to investigate the proposed relationships between service quality and customer satisfaction, food quality and customer satisfaction and, perceived value and customer satisfaction (H1-H3) as well as between customer satisfaction and behavioural intentions. The results of the Pearson correlation for the independent and dependent variables are exhibited in Table 4.3.

Table 4.3 Pearson Correlation Analysis between the Constructs

Variable	Customer Satisfaction	Behavioural Intentions	r-square
Service Quality	0.725**	-	0.5256
Food Quality	0.803**	-	0.6448
Perceived Value	0.705**	-	0.4970
Customer Satisfaction	-	0.746**	0.5565

Note: P<0.05**

H1: Service quality directly and positively influences customer satisfaction.

Based on the results stated in Table 4.3, service quality had a significant relationship with customer satisfaction ($r = 0.725$, $p < 0.05$). The positive Pearson correlation value of 0.725 shows a positive correlation between service quality and customer satisfaction. It can be concluded that when perception towards service quality is high, customer satisfaction will also be high. Service quality explained about 53% of the variance in customer satisfaction. The strength of the relationship is considered strong at 0.5256 as measured by r-square value. The results therefore support H1.

H2: Food quality directly and positively influences customer satisfaction.

The results of direct effect of food quality on customer satisfaction is shown by the positive Pearson correlation value of 0.803 and the correlation is significant at $p < 0.05$. Therefore, food quality had a positive relationship to customer satisfaction. Food quality explained about 65% of the variance in customer satisfaction. The strong correlation between food quality and customer satisfaction is evidenced by the r-square value of 0.6448. This indicates that when perception of food quality is good, customer satisfaction is also high. Hence, H2 is supported in this study.

H3: Perceived Value directly and positively influences customer satisfaction.

As shown in Table 4.3, the Pearson correlation value is 0.705 and the correlation is significant at $p < 0.05$. Hence, a significant correlation between perceived value and customer satisfaction is found. Furthermore, the positive correlation value indicates that the relationship between perceived value and customer satisfaction is positive. In terms of r coefficient square, about 50% variance of customer satisfaction was explained by perceived value. The strength of the relationship between perceived value and customer satisfaction is medium with r-square value of 0.4970. When customers' perception on perceived value is high, the level of customer satisfaction is also high. Therefore H3 is supported.

H4: Customer satisfaction directly and positively influences behavioural intentions.

The correlation between customer satisfaction and behavioural intentions is significant with a Pearson correlation value of 0.746. The positive value of Pearson correlation indicates that the relationship between customer satisfaction and

behavioural intentions is positively correlated. The result has noted that about 56% variance of behavioural intentions was explained by customer satisfaction. The strength of this relationship is considered strong at 0.5565 as measured by r-square value. Therefore, the positive perception towards customer satisfaction will lead to positive behavioural intentions. Thus, H4 is supported.

4.5.2 Hierarchical Multiple Regression Analysis

Although the Pearson Correlation analysis has demonstrated that service quality, food quality and perceived value positively influenced customer satisfaction as well as customer satisfaction positively influenced behavioural intentions, it is actually unpersuasive to relate them together without the mediating variable. The hypothesised mediation model (Figure 2.1) states that service quality, food quality and perceived value are expected to interact with customer satisfaction, which in turn will determine behavioural intentions. Hence, H5a - H5c predicted customer satisfaction as the mediating variable. Hierarchical Multiple Regressions was conducted to examine the mediating effect of customer satisfaction in the relationship between the independent variables (service quality, food quality and perceived value) and dependent variable (behavioural intentions).

Oh (2000) has agreed with Baron and Kenny's (1986) suggestion of using Hierarchical Multiple Regression as the clearest way to examine the effect of the mediating of a construct. Thus, it is an appropriate approach by using hierarchical regression to test the mediating effects in this study.

Baron and Kenny's guidelines for mediation were applied to test the mediating effect of customer satisfaction in the proposed model. The four guidelines are:

- 1) The independent variable is significantly associated with the mediator.
- 2) The independent variable is significantly associated with the dependent variable.
- 3) The mediator is associated with the dependent variable (with the predictor accounted for).
- 4) The addition of the mediator to the full model reduces the relation between the independent variable and dependent variable.

H5a: Customer satisfaction mediates the relationship between service quality and behavioural intentions.

The hypothesised mediation model indicates that service quality is expected to interact with customer satisfaction, which in turn will determine behavioural intentions among fast food consumers in Malaysia.

To perform mediated hierarchical regression, four guidelines proposed by Baron and Kenny (1986) were applied.

- 1) The independent variable (service quality) is significantly associated with the dependent variable (behavioural intentions).
- 2) The independent variable (service quality) is significantly associated with the mediator (customer satisfaction).
- 3) The mediator (customer satisfaction) is associated with the dependent variable (behavioural intentions) with the independent variable accounted for.

- 4) Finally the addition of the mediator (customer satisfaction) to the full model reduces the relation between the independent variable (service quality) and dependent variable (behavioural intentions).

Regression techniques were used to identify the direct path from service quality to behavioural intentions. The results showed that service quality predicted 29.4 % ($F = 124.362, p = 0.000$) of the variance in behavioural intentions in which fulfills the first requirement for mediation. For criterion 2, service quality was also significantly associated with customer satisfaction ($F = 330.067, p=0.000$). Therefore the second requirement of mediation is met.

In compliance with criterion 3 of the guidelines, customer satisfaction explained 55.7 % of the variance in behavioural intentions with the effects of service quality accounted for in the equation. Finally, the relationship between service quality and behavioural intentions decreased from 29.2% to 26.3%, ($F = 186.715, p=0.000$) when customer satisfaction was accounted for, supporting criteria 4 for mediation (see Table 4.4). Therefore, the results show that customer satisfaction is a mediator in the relationship between service quality and behavioural intentions. H5a is supported.

H5b: Customer satisfaction mediates the relationship between food quality and behavioural intentions.

The hypothesised mediation model indicates that food quality is expected to interact with customer satisfaction, which in turn will determine behavioural intentions among customers of FFR in Malaysia.

Table 4.4 Hierarchical Multiple Regression Analysis: Customer Satisfaction Mediating Service Quality and Behavioural Intentions

Block	Variables	R Square	ΔR Square	ΔF	β
<u>Dependent Variable = Behavioural Intentions</u>					
1	Service Quality	0.294	0.294	124.362	0.543**
2	Service Quality Customer Satisfaction	0.557	0.263	62.353	0.003 0.744**

**p<0.05

To perform mediated hierarchical regression, Baron and Kenny's (1986) guidelines were applied.

- 1) The independent variable (food quality) is significantly associated with the dependent variable (behavioural intentions).
- 2) The independent variable (food quality) is significantly associated with the mediator (customer satisfaction).
- 3) The mediator (customer satisfaction) is associated with the dependent variable (behavioural intentions) with the independent variable accounted for.
- 4) Finally the addition of the mediator (customer satisfaction) to the full model reduces the relation between the independent variable (food quality) and dependent variable (behavioural intentions).

Regression techniques were used to identify the direct path from food quality to behavioural intentions. Results demonstrated that food quality predicted 48.9 % (F =

285.676, $p = 0.000$) of the variance in behavioural intentions, thus fulfilling the first requirement for mediation. For criterion 2, food quality was also significantly associated with customer satisfaction ($F = 539.692$, $p=0.000$). Therefore the second requirement is met.

In compliance with criterion 3 of the guidelines, customer satisfaction explained 58.5 % of the variance in behavioural intentions with the influences of food quality accounted for in the equation. Finally, the relationship between food quality and behavioural intentions decreased from 48.9% to 9.6% ($F = 209.696$, $p=0.000$) when customer satisfaction was accounted for, supporting criteria 4 for mediation (see Table 4.5). Therefore, it implied that food quality influenced behavioural intentions through customer satisfaction. H5b is supported.

Table 4.5 Hierarchical Multiple Regression Analysis: Customer Satisfaction Mediating Food Quality and Behavioural Intentions

Block	Variables	R Square	Δ R Square	Δ F	β
<u>Dependent Variable = Behavioural Intentions</u>					
1	Food Quality	0.489	0.489	285.676	0.700**
2	Food Quality Customer Satisfaction	0.585	0.096	-75.98	0.283 0.519**

** $p < 0.05$

H5c: Customer satisfaction mediates the relationship between perceived value and behavioural intentions.

The hypothesised mediation model indicates that perceived value is expected to interact with customer satisfaction, which in turn will determine behavioural intentions among customers of FFR in Malaysia.

To perform mediated hierarchical regression, guidelines proposed by Baron and Kenny (1986) were again applied.

- 1) The independent variable (perceived value) is significantly associated with the dependent variable (behavioural intentions).
- 2) The independent variable (perceived value) is significantly associated with the mediator (customer satisfaction).
- 3) The mediator (customer satisfaction) is associated with the dependent variable (behavioural intentions) with the independent variable (perceived value) accounted for.
- 4) Finally the addition of the mediator (customer satisfaction) to the full model reduces the relation between the independent variable (perceived value) and dependent variable (behavioural intentions).

Regression techniques were used to identify the direct path from perceived value to behavioural intentions. The results demonstrated that perceived value predicted 40.3 % ($F = 200.919, p=0.000$) of the variance in behavioural intentions, thus, meeting the first requirement for mediation. For criterion 2, perceived value was also significantly associated with customer satisfaction ($F = 294.971, p=0.000$). Therefore the second requirement is met.

In compliance with criterion 3 of the guidelines, customer satisfaction explained 58% of the variance in behavioural intentions with the effects of perceived value accounted for in the equation. Finally, the relation between perceived value and behavioural intentions decreased from 40.3% to 17.7% ($F = 205.322$, $p=0.000$) when customer satisfaction was accounted for, demonstrating criteria 4 for mediation (see Table 4.6). Therefore, it shows that customer satisfaction played the role of mediator in the effects of perceived value on behavioural intentions. H5c is supported.

Table 4.6 Hierarchical Regression Analysis: Customer Satisfaction Mediating Perceived Value and Behavioural Intentions

Block	Variables	R Square	ΔR Square	ΔF	β
<u>Dependent Variable = Behavioural Intentions</u>					
1	Perceived Value	0.403	0.403	200.919	0.635**
2	Perceived Value Customer Satisfaction	0.580	0.177	4.403	0.215 0.594**

** $p < 0.05$

4.6 CONCLUSION

With a response rate of 93%, 300 questionnaires were used to be the samples of the study. Generally, the respondents made up of male undergraduate students between 21-23 years old who were single and who had parents with monthly income of less than RM2000. The majority of respondents had a last visit to FFR in less than 4 weeks and visited FFR less than 5 times a month. They visited cafeteria and food court most often.

The results of the reliability assessment have implied that each construct has exceeded the minimum acceptable level of reliability and has ensured adequate internal consistency (Nunnally, 1967; Smith et al, 1969). A series of Pearson correlation analysis have been performed to test hypotheses 1 to 4 while hierarchical multiple regression analyses have been performed to test hypotheses 5a to 5c. All the hypotheses proposed in this study have been supported.