CHAPTER FOUR

RESEARCH RESULTS

This chapter will discuss on the results of the pharmacy owners and the pharmacy customers' survey.

4.1 RESULTS FROM THE PHARMACY OWNERS OR MANAGERS' SURVEY

A total of 12 pharmacies were interviewed on the opening hours, days, staff strength, proportion of customers in a day, age groups of customers, average purchase, product category of purchase and proportion of customers in a week and the results were shown as below:

4.1.1 OPENING HOURS

The opening hours of the majority of the retail pharmacies surveyed vary between 8.00 a.m. and 10.30 a.m. while the closing hours vary between 6.00 p.m. and 9.30 p.m. These opening hours usually coincide with the opening hours of the nearby shops in the trading vicinity or shopping complexes. The chain pharmacies with more staff usually operate longer hours that the single owner pharmacy due to staff working in shifts for the chain pharmacies.

4.1.2 OPENING DAYS

Most of the pharmacies are open at least six days a week with some even opening for seven days a week. Chain pharmacies are able to open seven days a week while most of the single owner pharmacies open six days a week. While the majority of the pharmacies are only open from Mondays to Saturdays, a small number of the pharmacies are also open on Sundays.

4.1.3 STAFF STRENGTH

The number of staff varies from one in the smaller pharmacies to up to fifteen in the bigger pharmacies. The staff strength depends on the opening hours of the pharmacy and the overall size or turnover of the pharmacy. Single owner pharmacies usually have less staff when compared to the chain pharmacies. The staff strength will be correlated to the degree and quality of customer service that can be provided.

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4.1.4 PROPORTION OF CUSTOMERS IN A DAY

TABLE 1 : Percentage Of Customers In A Day

TIME	% OF CUSTOMERS	STD. DEV.
9.00 a.m. to 12.00 noon	25.6	8.1
12.00 noon to 3.00 p.m.	28.0	8.9
3.00 p.m. to 6.00 p.m.	25.6	9.5
6.00 p.m. to 9.00 p.m.	20.8	10.2

Table 1 shows the proportion of customers observed in a day. The findings shows that when the opening hours are split into four segments of three hours each the proportions of customers observed in a day were different. However the interpretations made have to take into account the earlier or later opening and closing hours of the different pharmacies. Since most of the pharmacies have opening hours of between 9.30 a.m. to 10.30 a.m. the proportion of customers in the mornings appears to be higher. Likewise since the closing hours of most of the pharmacies are between 6.30 p.m. to

8.30 p.m. the proportion of customers within this period (6.00p.m. to 9.00 p.m.) also appears higher than the average pattern.

4.1.5 AGE GROUPS

The results that nearly half of customers (54.83%) are in the of age segment from 30 to 49 years (31.08%). This indicate that the majority of pharmacy customers are from the older age groups shopping for the family needs. This age group observations are made by the staff of the respective pharmacies concerned. However variations in the age observations from different members of the staff may occur.

4.1.6 AVERAGE PURCHASE

The findings shows that the value of the average purchase is RM 12.92. Therefore the average shopper usually spends a relatively small sum of money on a typical visit to the pharmacy. This average takes into account all purchases including household items and confectioneries.

4.1.7 PRODUCT CATEGORY OF PURCHASES

TABLE 2: Product Category Of Purchases

PRODUCT CATEGORY	% OF TURNOVER	STD. DEV.
Prescription products	40.0	14.9
Over-the-counter products	25.0	6.1
Toiletries	11.0	6.9
Household products	5.8	4.2
Baby products	6.3	4.4
Confectioneries	3.9	4.2
Others (med. equipment etc.)	8.0	5.8

Table 2 shows the products that are normally purchased by customers during their visits to retail pharmacies. The results indicated that a large proportion of the customers' purchases include prescription products such as cough and cold medications, antibiotics, various steroidal skin preparations and other medications that may have been prescribed by the customers' doctors that have to be filled at a pharmacy.

However, over-the-counter products which include various vitamin preparations, health food preparations and common headache or pain remedies command quite a large portion of the total sales of a typical pharmacy. The rest of the product categories like toiletries, household, baby, confectioneries and various medical equipment contribute smaller but still significant percentages in terms of pharmacy sales.

4.1.8 PROPORTIONS OF CUSTOMERS IN A WEEK

TABLE 3: Proportions Of Customers In A Week

DAYS OF WEEK	% OF CUSTOMERS	STD. DEV.
MONDAY	19.4	5.0
TUESDAY	14.3	3.7
WEDNESDAY	14.6	3.9
THURSDAY	13.8	3.1
FRIDAY	13.8	3.2
SATURDAY	18.8	5.2
SUNDAY	5.3	8.9

Table 3 shows the percentage of customers on various days of a week. The above results shows that there is a higher percentage of customers observed on Mondays (19.4%) and Saturdays (18.8%). Since most of the pharmacies are closed on Sundays, those that are open still shows a significant percentage of customers (5.3%). These results show that the weekends and Mondays are the most busy days of the week for most pharmacies.

4.2 RESULTS OF THE PHARMACY CUSTOMERS SURVEY

4.2.1 DEMOGRAPHIC PROFILE

The demographic profile of the respondents for the survey is shown in Table 4. The demographic profile of the sample of pharmacy customers is presented in this section. Respondents were asked to indicate the extent of their agreement on the patronage factors based on a five point Likert Scale ranging from 1 for strongly agree to 5 for strongly disagree. The patronage behavior of most products are influenced by demographic characteristics of consumers. For example, the healthcare needs of a person in the twenties age group will differ from those of the fifties age group.

TABLE 4
Demographic Profile Of Pharmacy Customers

AGE GROUP	FREQUENCY	%
UNDER 21 YEARS	2	1.8
21 TO 30 YEARS	13	11.4
31 TO 40 YEARS	53	46.5
41 TO 50 YEARS	32	28.1
ABOVE 50 YEARS	14	12.3
TOTAL	114	100.0
GENDER		
MALE	71	62.3
FEMALE	43	37.7
TOTAL	114	100.0
ETHNIC GROUP		
MALAY	27	23.7
CHINESE	68	59.6
INDIAN/OTHERS	19	16.7
TOTAL	114	100.0
MARITAL STATUS		
SINGLE	8	7.0
MARRIED(CHILDREN)	92	80.7
MARRIED (WITHOUT CHILD)	14	12.3
TOTAL	114	100.0
EDUCATION LEVEL		
PRIMARY/SECONDARY	60	52.6
COLLEGE/UNIVERSITY	54	47.4
TOTAL	114	100.0
NO. OF PERSONS PER HOUSEHOLD		
ONE TO TWO	8	7.0
THREE TO FOUR	65	57.0
FIVE OR MORE	41	36.0
TOTAL	114	100.0
OCCUPATION		
CLERICAL/ADMIN.	7	6.1
SALES/MARKETING	27	23.7
MANAGERIAL	39	34.2
PROFESSIONAL	23	20.2
SELF-EMPLOYED/BUSINESS	18	15.8
TOTAL	114	100.0
HOUSEHOLD INCOME		
RM1000 TO RM2000	10	8.8
RM2001 TO RM3000	37	32.5
RM3001 TO RM4000	33	28.9
RM4000 TO RM 5000	15	13.2
ABOVE RM5000	19	16.7
TOTAL	114	100.0

From the study respondents in the age group of 31 and 40 years old comprise the highest percentage at 46.5% of the sample, while those in the age group of between 41 and 50 years next at 27.2%. The Chinese represent the majority i.e. 59.6% of the sample. In terms of marital status, married respondents with children predominate at 80.7%. The percentage of those completing secondary school is 52.6% followed by those completing university or college at 47.4%.

The majority of the average household size is three or more persons per household. The main occupational categories are managerial (34.2%), sales/marketing(23.7%) and professional (20.3%). The monthly household income of the majority of the respondents ranges from RM2001 to RM4000 (61.4%).

4.2.2 PATRONAGE FACTORS

Factor analysis is a statistical method that can be used to analyse interrelationship among a large number of variables and to explain these variables in terms of their underlying dimensions (factors). This approach involves finding a way of condensing the information contained in a number of original variables into a smaller set of dimensions (factors) with minimum loss of information. Factor analysis was conducted on the 26 items in the questionnaire to identify the underlying patronage factors. Five

factors with eigenvalues of more than 1.0 are considered significant. Only items with a factor loading of more than 0.40 were considered to be conceptually reflective of a factor. Table 5 provides a summary of the factor loadings for the various patronage factors. Factor 1 represents the location of the outlet. Factor 2 indicates the price while factor 3 reflects the environment. Factor 4 shows the advertisement and promotional effects and factor 5 indicates the service.

The mean scores of customers' patronage factors are given in Table 6. For some product categories the choice of a store may be more important than the choice of a brand to the customer. Customers frequently shop from store to store for a variety of products, and the motives for shopping may be quite distinct from the motives for buying a particular product. There are various factors that influence a customer's patronage choice. These factors includes product selection, product quality, pricing, location and service. These factors may not cover all the reasons for a customer to select a certain store but do provide useful information for retail managers.

For this study, a total of six factors were evaluated to examine which are considered to be more important than others as factors influencing

Table 5
Factor Loadings For Patronage

FACTOR 1	LOCATION			
				Factor Loading
Q6	Do not shop too far away			0.41
Q7	Convenient location more important than price			0.58
Q9	Convenient parking			0.46
FACTOR 2	PRICE			
Q10	Price cheaper than others			0.79
Q11	Price more important than service			0.44
Q12	Compare prices when shopping			0.64
Q13	Special discount given			0.87
FACTOR 3	ENVIRONMENT			
Q16	Do not like untidy selves			0.41
Q17	Goods should be neatly arranged			0.43
Q18	Good environment important			0.56
FACTOR 4	ADVERTISEMENT AND PROMOTION			
Q20	Advertisement of sale			0.69
Q21	Selection from brochure			0.88
Q22	Recommendation by friends/colleagues			0.43
FACTOR 5	SERVICE			
Q02	Staff are courteous			0.44
Q03	Courtesy more important than price			0.78

TABLE 6
Mean Scores Of Patronage Factors

SERVICE FACTOR	MEAN	STD. DEV
DO NOT LIKE TO WAIT FOR SERVICE	2.05	0.95
STAFF ARE COURTEOUS	2.04	0.91
COURTESY MORE IMPORTANT THAN LOCATION.	2.32	0.86
ADVICE FROM PHARMACIST	2.03	0.91
KNOW PHARMACIST PERSONALLY	2.99	2.87
LOCATION FACTOR		
DO NOT SHOP FAR FROM HOME	2.46	0.94
CONVENIENT LOCATION MORE IMPORTANT THAN PRICE	2.69	1.01
PHARMACY IN SHOPPING COMPLEX	3.73	0.88
CONVENIENT PARKING	2.80	2.09
PRICE FACTOR		
PRICE CHEAPER THAN OTHERS	2.53	0.85
PRICE MORE IMPORTANT THAN SERVICE	2.96	1.06·
COMPARE PRICE WHEN SHOPPING	2.89	2.05
SPECIAL DISCOUNT GIVEN	3.25	4.03
HIGH QUALITY EVEN IF PRICED HIGHER	3.24	2.04
ENVIRONMENT FACTOR		
LIGHTING AND DECOR ARE IMPORTANT	3.09	1.13
UNTIDY SELVES AND DISPLAY	2.18	1.01
GOODS NEATLY ARRANGED	2.20	0.86
GOOD ENVIRONMENT IMPORTANT	2.62	1.00
ADVERTISEMENT AND PROMOTION FACTOR		
ADVERTISEMENT OF SALE	3.48	1.00
SELECT FROM ADVERTISEMENT AND BROCHURE	3.32	1.19
RECOMMENDATION BY FRIENDS	2.89	1.32
PRODUCT RANGE FACTOR		
WIDE VARIETY OF ONE RANGE	2.95	0.90
WIDE RANGE OF PRODUCTS	2.05	0.79
BUY OTHER HOUSEHOLD ITEMS	2.82	1.07
LACK OF STOCK	2.11	0.87
SMALL VARIETY WILL SHOP ELSEWHERE	2.54	0.94

patronage. The factors that are chosen are service, location, price, environment, promotion and range of products.

From mean scores of the service factor, it can be observed that while most respondents agreed on advice from the pharmacist, staff courtesy and waiting for service as affecting their choice of a retail outlet, They disagreed on personal knowledge of the pharmacist as a patronage factor. The service factor is extremely important for the customers concerned. Most of the questions in this determinant received mean scores of between 2.03 to 2.05. This may indicate that service to customers in a retail environment especially in terms of advice from the pharmacist, courtesy and waiting period are the predominant factors in a customers' decision to shop at a certain store. The question on whether the customers needed help or advice from the pharmacist was replied most positively (mean score of 2.03) by the respondents. A retail pharmacy needs a full-time pharmacist to ensure that medications are properly dispensed and taken by the patients. This is because most medications prescribed by doctors for the various ailments will cause adverse effects if taken improperly. As a result the pharmacists' advice on the dosages, frequency of doses and side effects associated with the medications given will be necessary to the patients. Therefore most customers will seek advice and

information on the various medications before purchasing them from the pharmacy.

The item that was rated second highest in order of importance was courtesy by the pharmacy staff to the customers (mean score of 2.04). As with all retail business, customers' perceptions of the staff courtesy is extremely important to the image of the pharmacy. Staff courtesy may include various factors such as overall politeness, helpfulness and attitudes of the staff in the store.

The waiting period for service at a pharmacy (mean score of 2.05) should not be too long as the customers may be forced to shop elsewhere for the same products in future. Waiting period includes time needed for a prescription to be filled by the pharmacist or dispenser and time needed to pay at the cashier. The waiting time will be dependent on the various times of a day (peak or non-peak periods) and the number of staff available in the pharmacy such as cashiers and dispensers. Customers who get annoyed by the waiting time needed will chose to visit another pharmacy where the waiting time may be shorter.

The item on courtesy being more important than location was given a relatively high score by the respondents (2.32). Most customers do not mind going out of their way to shop at a store where the staff are especially kind or polite. As mentioned in the study by Donovan and Rossiter (1982), most customers consider shopping to be a pleasurable task where they are able to interact and talk to sales staff.

The next most important factor appears to be the range and variety of products provided for the customers with average scores of between 2.05 to 2.54. A wide range of products and avoidance of items needed being out-of-stock will be critical for customers' loyalty. Range of products includes the total number of items available for sale in the pharmacies which is different from the variety or number of items available in a particular product category (pharmaceuticals, toiletries etc.).

The item on wide range of products was given the highest rating by the respondents (2.05) followed by the item on lack of stock (2.11) and small variety of product available (2.54). These results may indicate that pharmacy customers usually prefer to purchase a wide range of items during their visits and dislike having to get a particular item elsewhere due to non-availability of stock. Most pharmacy customers are quite specific

about what they need when they visit a pharmacy and due to time constraints will be most annoyed when certain items needed are not in stock when they want it. The availability of other household products in a pharmacy was not rated highly by the customers (2.82). This could be because pharmacy customers only expect to purchase medicines and related items in a pharmacy and would prefer shopping for convenience and household items elsewhere. The wide variety of one range of product was not rate as that important by most respondents (2.95). This may be due to the fact that customers usually purchase one particular well-known brand when they visit the pharmacy.

Location has been found to be an important factor in a previous study (Arnold, Oum and Tigert 1983). Location usually includes the distance of store from the customers' home or office, transportation convenience, parking facilities available, traffic conditions in the vicinity and the availability of other stores nearby. All these parameters will influence the customers' perception of the location of a store.

For the location factor, the items on distance from home (2.46), convenient location (2.69) and convenient parking (2.80) were rated positively by the respondents. The location factor appears to be of moderate importance

with certain categories of customers preferring to shop close to home and convenient parking. Most customers do not wish to travel long distances to visit a pharmacy and convenient parking is obviously an important factor in urban areas such as Kuala Lumpur and Petaling Jaya. In cases where a doctor's prescription needs to be filled, the patient will prefer to visit a nearby pharmacy that is located within easy access from the clinic. However pharmacies located in shopping complexes do not seems to have an added advantage over other locations (score of 3.73). Location of each outlet relative to other outlet determines the competitiveness among outlets and their attractiveness to consumers. Consumers vary in their willingness to travel, which affects both the frequency of shopping and the set of stores considered.

The issue of price is usually difficult to examine in a consumer survey due to the difficulty in determining the price-quality relationship. The price factor will also vary in importance depending the product category purchased. A customer purchasing a simple headache remedy may compare the prices among pharmacies but the purchaser of a prescription drug for a serious ailment may not be willing to do comparison shopping. In this survey, the price factor were measured by items such as prices compared to other pharmacies (2.53), comparison of prices (2.89) and

price being more important than service given (2.96). Most of the items of this factor were not given a high rating by the respondents. Therefore the price factor does not feature as a very important issue for the customers who were surveyed. As expected, when the respondents are given the choice of cheaper prices or higher quality of service, most of the respondents remained indifferent and did not express a preference for low prices (score of 2.96). However care has to be taken to interpret these results as all customers may prefer lower prices and they would not hesitate to bargain for lower prices if needed. Most of the sole-proprietor pharmacies may be willing to offer a slight discount to attract more customers but the chain pharmacies are usually inflexible in the prices of the goods. Most pharmaceutical products have the recommended retail prices which the pharmacies will follow closely. The influence of price on consumers reflects many factors: the price consumers expect to pay for the product, the actual price level, the range of price alternatives available to consumers, prices consumers have paid in the past, and the consumers' price sensitivity.

Environmental factors of a store are difficult to quantify. The various factors of atmosphere, lighting, decor, display, cleanliness and overall ambiance may be taken as the store environment. In a study on the impact

of environment on shopping behavior (Donovan and Rossiter 1982), most customers considered the environment to be an important factor for store patronage.

For the environmental factors, although customers appreciate neat selves or display (score of 2.18) and good stock arrangements (score of 2.20), lighting and decor do not appear to be that important to them (score of 3.09). These results may indicate that display and neat arrangement of stocks were deemed important by the respondents mainly due to the fact that most customers in a self-service store would prefer to select their own products without much help from the store assistants. Neatness of the pharmacy will enhance the overall image of the store while good stock arrangement will enable customers to choose their products easily in a self-service store. Environment of the pharmacy was rated higher than the lightings and decor although the two items may be interrelated to a certain extent. It is noted that most of the chain pharmacies have better displays and decor when compared to the sole proprietor pharmacies. The reasons for the difference may be that the chain pharmacies employ more staff to maintain the cleanliness and tidiness of the store.

Advertisement and promotional activities are part of the overall stimuli to influence consumer behavior in a store. The overall impact of these activities will depend on the category of products. Some products, especially health foods and vitamins are especially conducive for this type of promotion. However, promotion of most pharmaceutical items in this manner are more difficult and certain categories of pharmaceuticals are prohibited from being advertised to the public under the law..

The factor on advertisement and promotion was measured by items on sale advertisement, selection of products from brochures and recommendation from friends. In terms of advertisement and promotional factors the customers do not feel that these factors are important at all.(scores from 2.89 to 3.32). However, as competition among the various retail pharmacies increases, more advertisements will be needed to provide an edge to a pharmacy for its survival. The chain pharmacies are able to advertise in the various mass media such as television and radio which are able to reach a larger customer population. Whether the mass media advertisements are able to affect patronage behavior remains to be seen.

In conclusion the results of this survey show that the service factors were considered the most important followed by product range, location,

environment, price and promotional factors. The findings of this study correlate closely with the findings of Kelly and Stephenson (1967) who listed eight dimensions of general store characteristics, physical characteristics, convenience, products offered, prices, store service, advertisement and friends' perception of store which were indicated as most important for store choice in a retail environment.