

CHAPTER 3

RESEARCH METHODOLOGY

The chapter outlines the methodology employed in the study. The study was carried out by utilizing the survey approach. This chapter describes the design of the research instrument, the sampling procedure and data collection procedure. The tools of data analysis used are also discussed.

3.1 RESEARCH INSTRUMENT

The survey instrument was a twelve-page questionnaire (see Appendix A). The questionnaire was divided into three parts: A, B and C. Part A was designed to measure the psychographic characteristics of the respondents based on the findings of past research on over-the-counter pharmaceutical products and other products. This section consisted of 42 activity, interest and opinion (AIO) statements. These would cover respondent's shopping activities, interests and opinions on price, brand, information seeker, health and safety consciousness, healthy lifestyle, stressful lifestyle, exerciser and quality minded. General and product specific AIO statements were included in this section. Respondents were required to rate their level of agreement to each statement on a 5-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Inputs for the AIO statements used were drawn from several sources. These include the AIO inventory developed by Chan (1988), Chong (1996), Wells & Tigert (1971), Reynolds (1974), Chong (1994), Tam (1998) and Kaur (1990).

Majority of the statements were taken from the study by Chan (1988). Chan has used 23 AIO statements to map out the psychographic profiles of a group of Singaporean respondents on the Singapore over-the-counter market for analgesics and antipyretics. The statements taken from his study are statements 19, 25 and 30 to measure brand trier consumer, statement 3 and 5 to measure health and safety conscious consumer and statement 2 and 22 to measure information seeking consumer. To measure healthy lifestyle of respondents, the following statements were taken such as statement 9, 13, 16 and 26 whereas statement 10, 12, 17, 27, 31 and 32 were adopted for measuring stressful lifestyle. In addition to that, five statements from Chan (1988) were slightly modified to suit this study as shown below in Table 3.1 to measure information seeker consumer, brand trier consumer and stressful lifestyle consumer.

Table 3.1

List of Statements Modified From Chan (1988) Study

Statement No.	Original Statement	Modified Statement	Measuring
15	I usually read the words on the label of the medicines which I buy/take.	I usually read the words on the label of the dietary supplements which I buy/take.	Information seeker
19	I will try samples of these medicines if given.	I will try samples of dietary supplements if given.	Brand Trier
25	I am willing to stock more than one brand of these medicines at home.	I am willing to stock more than one brand of dietary supplement at home.	Brand Trier

29	I drink excessively.	I drink alcohol excessively.	Stressful Lifestyle
30	If I cannot get my usual brand of the medicine, I will get another brand.	If I cannot get my usual brand for the dietary supplement, I will get another brand.	Brand Trier

Four statements were taken from a study by Chong (1996) to study product attribute and psychographic profile of lipstick and face powder consumers in Klang Valley. Statement 11 was used to measure on health and safety conscious consumer. Statements 1, 7 14 were used to measure price consciousness and statement 4 as a measure of brand consciousness were adopted.

Ten statements were taken from a study by Chong (1994). Chong has used 57 AIO statements to map out the psychographic profile of consumers in Malaysia and France for pharmaceutical over-the-counter products. Two statements which are statements 8 and 21 were used to measure health and safety consciousness consumer, statement 37, 40 and 41 to measure quality minded consumer while statement 18, 24, 28, 33 and 42 adopted were to measure exerciser consumer.

Five statements were borrowed from the Activities, Interests and Opinion (AIO) inventory developed by Wells and Tigert (1971). Statement 20 and 34 was adopted was designed to measure price consciousness consumer, statement 38 to measure brand trier consumer and statement 35 and 39 was used to measure information seeker consumer. Statement 6 was taken from

Reynolds (1974) study which was created to measure brand trier and statement 23 was taken from a study by Kaur (1990) measuring the quality minded consumer. Statement 36 and 43 were adopted to measure health and safety consciousness consumer. Table 3.2 below shows a summary of the AIO statements used in the study together with the variables measured.

Table 3.2

Details of Lifestyle Items Adopted In the Study

No.	Statement	Adapted from	Measuring
1	I usually watch the advertisement for sales.	Chong (1996)	Price consciousness
7	I can save a lot of money by shopping around for bargains.	Chong (1996)	
14	I find myself checking the prices even for small items.	Chong (1996)	
20	I usually compare prices before buying.	Wells & Tigert (1971)	Price consciousness
24	I shop a lot for "specials".	Wells & Tigert (1971)	
4	I like to try new and different products.	Chong (1996)	Brand Trier
6	When I see a new brand on the shelf, I often buy it just to see what it is like.	Reynolds (1974)	
38	I often try new brands before my friends and neighbours do.	Wells & Tigert (1971)	
2	My choice of brands for many products is influenced by advertisements and commercials.	Chan (1988)	Information seeker
22	My friends usually give me	Chan (1988)	

	pretty good advice on what brands of things to buy.		
39	I often seek out the advice of my friends regarding which brand to buy.	Wells & Tigert (1971)	
35	I spend a lot of time talking with my friends about products and brands.	Wells & Tigert (1971)	
3	Everyone should take vitamins.	Chan (1988)	Health and safety consciousness
5	I often read books and articles on "health" matters.	Chan (1988)	
36	I am more health conscious than most of my friends	Tam (1998)	
31	I frequently purchase "health food"/"natural food"	Tam (1998)	
11	I believe that a person's most important asset is his/her health.	Chong (1996)	
21	Alcoholic drink is undesirable for health.	Chong (1994)	
8	Smoking is bad for health.	Chong (1994)	
23	I prefer to buy quality products even though they maybe high priced.	Kaur (1990)	Quality minded
37	I generally try to buy products known for its quality.	Chong (1994)	Quality Minded
40	I do not mind to pay extra for quality.		
41	You get what you pay for.		
42	Knowing a salesperson in the store makes my shopping far more enjoyable.	Chong (1996)	Quality Minded
9	I exercise regularly.	Chan (1988)	Healthy Lifestyle

16	I hardly ever get a headache.		
13	I am careful about my diet		
26	I do not smoke.		
10	I worry a lot.	Chan (1988)	Stressful Lifestyle
32	My daily schedule is very hectic.		
12	I catch a cold very often.		
27	I hate to lose at anything.		
17	Everything is changing too fast today.		
24	I walk or jog for exercise.	Chong (1994)	Exerciser
33	I do other exercise besides walking/jogging.		
18	I exercise to keep fit.	Chong (1994)	Exerciser
28	I enjoy outdoor activities.		

In designing the questionnaire, the items measuring various constructs were randomized throughout Part A rather than similar statements being presented together. It was felt that this would create more thought and seriousness from the respondents. Furthermore, a check on the consistency of the responses would provide an indication of the reliability and usability of the responses.

Part B contained ten questions which involves finding out the respondents consumption frequency, type and brands of dietary supplement used and source of purchase. All variables in Section B were measured through close-ended multiple choice questions. Part C was designed to collect the demographic information of the respondents. This part contained nine

questions covering gender, race, age, marital status, number of children, education level, occupation, personal and household monthly income.

Prior to the actual survey, a pilot test was conducted with five respondents who fulfilled the criteria of the sample. The objective of the pilot test was to test the contents and clarity of the questionnaire. Pre-tested feedback was gathered on the clarity of instructions and statements and on how the questionnaire could be improved. The final questionnaire was developed based on these feedbacks and was written in two versions (English/Bahasa Melayu and Chinese version) via translation and retranslation procedure. These translations were then retranslated back to English to ensure the accuracy of the translation.

3.2 SAMPLING DESIGN

This section outlined the sampling procedure employed in the study. The major parts covered include sample size, sampling method and data analysis technique used in this study.

3.2.1 SAMPLE SIZE

The targeted sample size was 250. 400 copies of the twelve pages questionnaire were distributed to the targeted sample with the hope to obtain at least 250 copies.

3.2.2 DATA COLLECTION PROCEDURE

Convenience sampling was employed for the study. The sample selected was confined to residents in Kuala Lumpur, Selangor and Perak. Areas selected are Kuala Lumpur, Damansara, Petaling Jaya, Shah Alam, Ipoh and Taiping. Respondents should be at least 16 years old and have used dietary supplements like vitamins, minerals and herbal products before. Based on the assumption that the self-administered questionnaire used in this study would require a certain level of maturity and understanding from the respondents, the age of 16 was set as a reasonable cut-off point as what was employed in the study by Chong (1996) where such assumption was also made.

The survey was conducted over a 4 week period in February 2005. Due to time and costs limitation, convenience sampling method was used in this study. Self administered drop-off method at offices, pharmacies and schools to obtain responses from respondents using a twelve page structured questionnaire. The study was undisguised and the respondents informed of the purpose of the study.

3.3 DATA ANALYSIS TECHNIQUES

The survey data was analyzed using the latest Statistical Package for Social Science Program (SPSS) version 12.0 program. The analysis was divided into 3 main parts.

First, to portray the general characteristics of the respondents, frequency counts and cross tabulation were obtained. Subsequently, the respondents

were categorized as regular and non-regular users for the purpose of this study. Regular users are defined as those who take dietary supplements daily or at least on a weekly basis for the past one year. Chi-square analysis was then applied to test the demographic characteristics of the regular and non-regular users of dietary supplements. Next, the behaviour of regular and non-regular users were analysed to identify their opinions on dietary supplement consumption and purchase pattern.

Factor analysis was then performed on the 42 AIO statements measuring the shopping activities, interest and opinion of respondents to discover the major underlying buying behavior dimensions. Factor analysis is a technique used for the purpose of data reduction and summarization. It identifies important dimensions by which people or products may be differentiated. It condenses AIO data by putting related statements together into categories called factors. Factors are generated by using principal components analysis and varimax rotated factor analysis. The Cronbach's coefficient alpha was used to test the internal reliability of the factors obtained (Nunnally, 1978).

Having identified the lifestyle dimensions, T-test was then used in the final part of the data analysis to examine the extent to which regular and non-regular users of dietary supplements portrayed these dimensions and if significant differences exist between the two groups.

3.4 LIMITATIONS OF THE SAMPLING PROCEDURE

There are limitations in this study. Firstly, a convenience sampling was utilized in this study due to costs and time constraint. Therefore, generalizations should be cautiously made as the results may not be representative of the behaviour of users as a whole.

Next, the study was confined to those staying in Kuala Lumpur, Selangor and Perak only. Other parts of the country were excluded from the research due to time and cost constraints. Consequently, this study is subjected to the limitations and possible biases that exist when only certain geographic area which may not be representative of the total is studied. There is a possibility that samples from other parts of the country may lead to different findings because the lifestyle of these consumers may not be similar to those living in other parts of the country. Therefore, a larger and more diverse sampling from different parts of Malaysia will produce a better more generalize results for the dietary supplement users.

Furthermore, the sample size used in this study is considered small as compared to other studies on dietary supplements which involved greater number of respondents. A larger sample size would be preferred to obtain more accurate interpretation.