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**Consumer Decision Making and
Store Patronage Behaviour in Traditional Chinese Medicine
(TCM) Halls in Singapore**

By

Jaclyn Pit Ting, Tan

and

Paul Freathy*

*contact author

Institute for Retail Studies
University of Stirling
Scotland
FK9 4LA

Temasek Business School
Temasek Polytechnic
21 Tampines Avenue 1
Singapore 529757

Tel: +44 1786 467410
e-mail: j.p.freathy@stir.ac.uk

Consumer Decision Making and Store Patronage Behaviour in Traditional Chinese Medical Halls in Singapore

Abstract

This paper examines who patronises Traditional Chinese Medicine (TCM) halls in Singapore and for what purpose. A quantitative study of 400 respondents identifies that TCMs are used primarily for the improvement of health and well being rather than the treatment of more serious medical conditions. While the patronage of TCM stores is not restricted to the Chinese population, traditional Mom-and-Pop outlets have come under increasing pressure from new market entrants. When choosing a TCM outlet, customers consider price and quality to be important factors while trust in the store keeper was also identified as a key determinant of store choice.

Keywords

Traditional Chinese Medicine Halls
Consumer Behaviour
Store Choice Criteria

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1. Introduction

Traditional Chinese medicine (TCM) is one the most widely practiced traditional medicine systems in the world (Duncan and Vertefeuille 2003) and TCM practitioners have long been an integral part of Singapore's healthcare system. However in recent years the popularity of TCM has started to wane in favour of Western medical practices (Lee 2006).

In 2000, the Singapore Ministry of Health introduced the TCM Practitioners Act, requiring practitioners to possess a valid practice certificate and conform to professional guidelines and a code of ethics (Health Sciences Authority Singapore). As a result, the standard of provision has been raised as has the level of public confidence in TCM (Shen et al, 2005).

However, not everyone has welcomed the changes. David Tang, head of the Singapore TCM's Organisation Committee noted that, "Older establishments find it difficult to conform. Modern practices are squeezing out Mom and-Pop apothecaries, where remedies are mixed by the pinch or handful" (quoted in Whitley 2006).

While the traditional 'Mom-and-Pop' halls¹ may be in the process of slowly disappearing, TCM itself is undergoing a resurgence, with companies such as Z T P and Hock Hua, opening new contemporary formats. The industry leader, Eu Yan Sang

¹ TCM outlets have traditionally been called 'halls'. In this paper, the terms hall, store and outlet are used interchangeably.

not only operates a chain of modern retail outlets but also has research facilities and a number of private clinics.

The aim of this paper is to provide a better understanding of who uses TCM halls in Singapore and to provide an insight into their buying behaviour. It will look at the type of products purchased and customer's rationales for using TCM products. The research will then attempt to ascertain the most critical store attributes when selecting an outlet and comment on likely future changes in the TCM market.

In order to achieve these outcomes, the paper is divided as follows, first a review of the consumer decision making process and store patronage theories helps provide a conceptual framework for this paper. This will be followed by a brief overview of the structure of the TCM industry. After detailing the methodology, the paper provides an empirical section that outlines the findings of the research. Finally a series of conclusions are drawn.

2. Buyer behaviour and patronage theories

Santesmases (1996) noted the complexity of buying behaviour with numerous internal and external variables influencing the decision to purchase. Moreover it was identified that decision making varied according to product type with different products carrying different levels of risk. Consumer behaviour therefore requires an understanding of the actions directly involved in obtaining, consuming, and disposing of products and services, including the decision processes that precede and follow these actions (Engel et al, 2000).

Broadly there are two approaches for analysing consumer buying decisions. *Psychological models* concentrate upon psychological and cognitive processes such as motivation and need recognition. They focus upon the motives for buying and the process of learning and attempt to explain how perceptions, beliefs, attitudes and the buying situation, affect consumer behaviour. Psychological models also draw upon an understanding of sociological models and view consumer behaviour in the context of factors such as culture, social class, family, and lifestyle (Armstrong et al 2007).

A second approach to understanding consumer decision making views the process in terms of a sequence of cognitive stages that involves information search, alternative evaluation, purchase decision and outcome evaluation (Schiffman and Kanuk 1994; Solomon 1996). Consumer decision-making is therefore depicted as being both multi-staged and complex with several factors triggering problem recognition before initiating a sequence of actions to reach an outcome of satisfaction or dissatisfaction (Cox et al, 1983; Harrel, 1990). Such models vary in their approaches and utility. The most widely employed are those proposed by Nicosia (1968), Howard and Sheth (1968), Engel et al (1979) and Engel et al (2000).

While there is an abundant literature on the above models and concepts, the majority of empirical studies have been carried out in Europe and America. Fewer attempts have been made to understand consumer decision making in an Asian context and perhaps unsurprisingly none of this work appears to have been applied to the TCM industry.

One weakness of consumer decision making models is that they do not consider how consumers evaluate different service channels (Ehrenberg 1998). In the context of this study, it is important to understand the reasons and variables that affect TCM customer store choice selection. As such, it remains relevant to also examine briefly the literature on store patronage behaviour.

Store image is believed to have strong influence on the consumer's choice of retail store. Martineau (1958) purported that a store is defined in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes. Lindquist (1974) shares a similar view and describes store choice as a combination of tangible and intangible factors that reflect consumer attitudes towards individual stores. Neal et al (1999) and May (1981) further suggested that retailers should be concerned not only with their own image, but also the image of their mall / precinct as consumers may make their patronage decisions based on the shopping environs as well as the individual store.

Visser and du Preez (2001) note that shopping orientation is a complex and multidimensional concept that is extremely difficult to define. As Shim and Kotsiopulos (1992) state:

“..researchers have investigated various relationships among factors influencing both shopping orientations and patronage behaviour, and their findings appear to be inconsistent” (p.49).

Although complex, a number of previous retail and marketing studies have identified several consumer oriented store attributes as being potentially significant for the consumer's evaluation of stores. They include merchandise assortment and quality,

customer service, store lay-out, convenience, cleanliness and atmosphere (Mazursky & Jacoby 1986; Levy & Weitz 2001 and Blackwell et al. 2001). Neal et al (1999) for example identified the dimensions considered critical in influencing store choice (Table 1).

Table 1 about here

While many attributes are important to customers, advocates of determinant attributes theory like Myers and Alpert (1968) and Arnold et al (1983) asserted that there will only be one or a few pertinent factors which are perceived to be the decisive factor(s) across the various retail formats.

As noted, the majority of studies on consumer behaviour have been conducted in the United States and Europe, with a concentration on the food and grocery industries. Prior to detailing the profile and decision making process of TCM shoppers, the next section will provide a brief contextual overview of TCM in Singapore.

3. TCM in Singapore

Singapore is a multi-racial country with a population of 4.6 million. The Chinese form the largest ethnic group (76%), followed by the Malays (14%), Indians (6%) and other races (4%). TCM is a system of medicine that aims to prevent or heal disease by maintaining or restoring the yin-yang balance in the body. It is derived from the belief that all forces in nature are interconnected and interdependent and that treatments can assist in the achievement of balance and harmony (Eu Yang San 2007).

The diagnosis of a patient's condition in TCM consists of three activities: an extensive interview, pulse diagnosis, and a tongue examination. The prescriptions are made up of herbs that are derived from plant, animal, and mineral substances. Patients have to boil the combinations of herbs and then allow the concoction to simmer for hours before drinking. The strength of TCM lies in its gentle, gradual remedies and is aimed at evaluating and improving the physical, mental, spiritual and social circumstances of the patient (Sivin 1987).

A traditional 'Mom-and-Pop' TCM hall is typically a shop-house that provides these herbal remedies to customers. Patients seek advice from the 'pharmacist' on dosages and the duration of treatments. The pharmacist then picks the appropriate herbal mix for customers to take home and boil. In addition, a TCM hall sells 'over the counter' medicines for minor ailments such as flu, fever as well as wellness improvement products such as bird nests and cordyceps².

Traditional TCM halls in Singapore are mainly family run and are passed down through the generations. It is a male oriented industry that operates on an apprentice - master relationship with the son learning from the father. While still operating in many public housing areas, this form of TCMs has been in decline for a number of years. One reason has been, that for the past three decades Singapore Government policies have favoured a Western based healthcare system and viewed TCM as a secondary form of treatment for the Chinese population.

Government backed schemes in the 1980s such as Medisave, (a compulsory savings programme based on a payroll levy) and Medishield (an insurance scheme) ensured

² Cordyceps is a genus of fungi that includes about 400 described species.

that every Singaporean had access to basic medical care irrespective of their socio-economic status (Puay and Tang 2004; Reisman 2006). While Western treatments received substantial funding and investment, the same support was not extended to TCM. There were no subsidies from the Government for individuals seeking healthcare through TCM and medical notes from TCM practitioners were not recognised by employers. Despite this, traditional Chinese medicine still managed to maintain a loyal following. By the end of the 1980s, there were twenty six TCM clinics and an estimated 1000 TCM practitioners distributed throughout the island (Yeoh 2003). The TCM halls continued their traditional practices but also started selling Western pharmaceutical brands and toiletries to cater to an increasingly eclectic customer base.

With the emergence of China as an economic power in the 1990's, TCM again started to gain world wide attention and popularity in the West (Wu et al, 2007). However, it was also during this time that issues in the practice of TCM came under additional scrutiny. For example, Chinese herbs, unlike most purified Western medicines often have multiple effects and can act as a sedative, a diuretic or may have hypotensive or anti microbial actions (Yee et al 2005). Also at this time TCM received little support from Western medical practitioners and there was a push for 'convergence' towards modern practices (Leung et al 2003 and Yeo 2003). As a consequence the Singapore Government passed the TCM Practitioners Act in 2000, one element of which ensured the safety and traceability of TCM ingredients.

Eu Yan Sang was amongst the first TCM company to respond to these changes (Goh 2007). It collaborated with the Chinese University of Hong Kong to provide scientific

evidence confirming the beneficial effects of its flagship products. It also introduced new product formulas in capsule forms, modernised its image, set up a chain of stores in shopping malls and engaged in sales promotions. This approach was soon adopted by other TCM companies such as Hock Hua, Z T P and Bee's Brands.

In the wake of this modernisation programme many of the traditional Mom-and-Pop TCM halls struggled to survive. In the late 1990s, the Government introduced a support programme that assisted shop owners to retire or restructure their business. Those who gave up their business received an ex gratia payment of S\$60,000 (Housing Development Board official website). This initiative was a catalyst that saw the number of traditional TCM halls fall from 800 in 1996 (Ministry of Health website) to approximately 180 in 2008 (Singapore Yellow Pages 2008).

While there has been a decline in the number of Mom-and-Pop outlets, there has also been a number of new entrants into the TCM market. At the premium end of the healthcare sector, the market is dominated by TCM companies from China. These have been established in collaboration with local hospitals, for example, Ma Kwang TCM Medical Group has 31 clinics in Singapore. At the other end of the spectrum supermarkets and convenience stores sell popular TCM products such as Chinese medical oil and essence of chicken while Western pharmacies and health care stores also offer supplements made from Chinese herbs. Figure 1 illustrates the structure and the major competitors in the market.

Figure 1 about here

4. Hypotheses and Methodology

Based upon the previous discussions a number of hypotheses may be formulated. Given the emphasis placed upon Western medicine by the Singapore Government, it is likely that:

H1: Individuals will display a preference for Western health care formats when seeking treatment for a serious illness and this preference will be displayed amongst all respondents regardless of socio demographic background.

In contrast TCMs provide the opportunity for individuals to seek traditional treatments for relatively minor ailments. Moreover as the literature suggest, they are mostly frequented by older, lower income consumers. Therefore it may be hypothesised that:

H2: Individuals seeking treatment for minor ailments will use a variety of health care formats and the pattern of usage will vary by socio demographic background.

Previous research has suggested that TCM outlets in Singapore have traditionally been independently owned, family businesses linked closely to the local community. Many TCM practitioners are known on a personal level and their advice is valued and trusted by consumers. As a consequence personal relationships appear to be of primary importance when choosing a TCM outlet. Therefore:

H3 The choice and patronage of TCM halls will be primarily based upon relational factors such as the knowledge displayed by store staff and the reputation of the practitioner.

The literature also suggests that the TCM market continues to evolve with the entry of new, modern chains entering the sector. Small independent halls have come under significant competitive pressures from larger multiple outlet retailers. These new market entrants are typically located in shopping malls, operate from modernised premises and provide new and innovative products. Therefore:

H4 Respondents will perceive differences in the product offer and the levels of service provided in TCM halls depending upon the store format.

Secondary data for this research encompassed reports written by medical practitioners on the healthcare system of Singapore, the histories of Chinese and Western hospitals, as well as statistics from the Singapore Department of Statistics and the Housing and Development Board.

To fully understand consumer patronage behaviour within TCM stores, the first stage of the empirical research sought to gain a supply side perspective. A series of exploratory interviews were held with practitioners from the TCM industry. The objective of these discussions was to better understand the issues involved in running and managing a TCM outlet as well as informing the quantitative research that subsequently followed. Three owners of Mom-and-Pop stores were interviewed, together with managers from four national TCM organisations. In addition, a store

manager of a Health and Beauty outlet and the Country Manager of a Western pharmacy chain were also interviewed.

The next stage of the research involved a survey of 400 respondents with racial and age distributions similar to that of the Singaporean population. The age, ethnic group, occupation, marital status, average household monthly income, education level, pattern of drug use (self medication, TCM clinics, western doctors etc;), expenditure per trip, information sources, preferences and reasons for choice of format were noted. Construct validity was also taken into consideration through the use of dimensions studied in previous behavioural research. Forty questionnaires were initially piloted with relevant amendments being made prior to the main distribution.

While the major users of TCMs are Chinese Singaporeans, reports note that other races also patronize these outlets (The Sunday Times, 23 March 2008). The research therefore did not focus exclusively upon any one ethnic group. A team of interviewers, made up of the four main races in Singapore were engaged as interviewers for this study. All of them were bi-lingual (proficient in English and their mother tongues) and some were also fluent in local dialects. While all were experienced in market research methods, in order to minimize interview error, specific training was provided before the survey. Face to face interviews were conducted over a three week period in August at town centres and shopping malls. To minimize sampling bias, every tenth person was interviewed until the required number was reached. Data were coded and entered into SPSS (v16.0) and in order to lessen processing errors, data entry was undertaken by two persons.

The main limitation of this research is the limited industry information and academic literature on TCM. Important variables may not have been documented. In addition while it is recognised that there are differing levels of complexity in consumer decision making, the study does not differentiate between extended, limited and routine decision making. The risk involved in buying a herbal drink may be different from that of buying generic herbs.

5. Findings

The first stage of the research was to determine a profile of who frequented TCM outlets. The survey revealed that 73% (n = 292) of the respondents had shopped at a TCM store before. Overall there was a greater propensity for female respondents to visit an outlet (170 out of 202 respondents (84.2%)) although the research noted that over 60% of males had also previously used a TCM hall (122 out of 198 respondents).

The results also highlighted that patronising a TCM outlet was not only popular amongst the Chinese population of Singapore, other major races also frequented these stores (Table 2).

Table 2 about here

The Malay population have their own systems of traditional medicine (Bomoh, Tukang and Bidan) and as such they may rely more on these forms of alternate medicines. In recognition of the importance of non Chinese customers, several

manufacturers such as Brand's (the oldest supplier of chicken essence in Singapore) offer a range of products that are certified "Halal".

The analysis also showed that shopping at TCM outlets was not as popular amongst the under 30s category, 52.5% (n=160) had never visited a TCM hall before. In contrast, over 70% (n= 240) of respondents over the age of 30 were TCM customers.

The overwhelming majority of individuals who used TCM outlets only did so when there was a specific need (80.8%), (for example, during Chinese New Year to buy abalone or when they required health related advice). Impulse buyers constituted only 10.6% of respondents and those attracted by sales promotion comprised only 8.6% of the sample. A small portion (4.1%) of respondents visited a TCM Hall weekly, these respondents were all in the 50+ age category.

Just over half of TCM users (51.4%) maintained that they were the main decision maker when it came to choosing which products to purchase while just under a third (32.3%) bought items on the recommendation of the retailer. Interestingly, 13% of respondents noted that they let their spouses choose which products should be bought.

The largest cohort of TCM customers (45.9%) spent between \$10-\$49 per visit. While 16.4% of customers spent less than \$10 per trip, almost half of these respondents (7.5%) were under the age of 30. Younger age groups would therefore appear not to be heavy users of TCM products. Only 5.5% of TCM users spent more than \$200 per visit, the majority of whom were in the 40-49 age bracket.

Having established a profile of the TCM consumer, the next stage of the research sought to identify the main purposes for using a TCM outlet. In particular it asked respondents where they would seek medical help from if they were seriously ill or if they suffered from minor ailments (Tables 3 and 4).

Tables 3 and 4 about here

If seriously ill, the overwhelming respondents (98.6%) either preferred to use Western medicines or to see both a Chinese and Western doctor at the same time. No respondent elected to use a TCM and when cross tabulated against the socio demographic variables of gender, race age, marital status, occupation, housing type and income, no significant relationship was identified³.

However, if the sickness was minor (such as flu, cough or fever), over half of the respondents noted that they would self medicate, with 20% maintaining they would consider buying medicine from a TCM outlet. Table 5 illustrates that when cross tabulated against a series of socio-demographic variables significant differences were identified.

Table 5 about here

Women were shown to exhibit a greater propensity to visit a doctor or attend a clinic when seeking treatment for minor ailments. In contrast men displayed a greater likelihood to self medicate and use a TCM or Western pharmacy. Respondents over

³ Chi squared analysis was used to determine the significance of the relationship.

the age of 50 also displayed a slightly different set of preferences. While their first choice was still the Western clinics (50%), they were more likely to use TCM halls for self medicating medicine (28%) rather than a Western pharmacy (18.8%). Only 4.1% of the over 50s chose to visit Chinese clinics when they suffered from minor ailments. Overall the results demonstrate that when Singaporeans fall sick, regardless of the seriousness of the illnesses, the majority would seek help from a Western hospital, clinic or pharmacy. Such findings are unsurprising and affirm that Western medicine is the primary form of health care in Singapore.

The next stage of the research was to identify the most popular products purchased from TCM outlets. Almost 36% of individuals cited tonics (such as ginseng, birds nest, essence of chicken) as the product category they bought most often. This was true for both Mom-and-Pop and modernised TCM stores. In addition to tonics, TCM customers also bought a variety of different herbal drinks (these are seen as preventative medicines that ‘cool’ the body and prevent a person from falling sick) (Table 6).

Table 6 about here

The research therefore demonstrates that TCM halls and Western pharmacies fulfil different customer needs. The former was the primary choice for tonics and herbal drinks while the latter provided medicines for minor ailments as well as toiletries. Moreover Mom-and-Pop outlets face direct competition from the modernised TCM halls, both of whom compete for the same customers.

The findings also identified that Mom-and-Pop halls were able to differentiate themselves from the modern TCM stores with 24% of respondents using these traditional outlets for 'special prescriptions for illness' (typically a herbal mix). In contrast only 2.1% of respondents cited this as the main product they bought from modernised TCM halls. Interestingly, the study also highlighted that only 2.7% of TCM customers had never shopped at a Mom-and-Pop outlet before (all were in the 20-29 years age group).

The next stage of the research examined which factors respondents considered important when choosing a specific TCM outlet (Table 7).

Table 7 about here

TCM customers rated Staff Knowledge, Quality of Merchandise and Merchandise Prices (scored 4.22, 4.21 and 3.92 respectively on the applied 5-point scale) as the three most important store choice factors. Table 7 suggests that Singapore consumers base the choice of TCM upon a number of different criteria. To understand more fully the nature of this choice, responses to the 14 item question were then subject to a Principal Components Analysis with varimax rotation. As the Kaiser-Meyer-Olin (KMO) measure of sampling adequacy was .731 and the χ^2 of Bartlett's Test of Sphericity was 1401 (sig=.0000) this form of analysis was deemed appropriate. Stevens (1986) recommends the use of eigenvalues-one criterion when less than 30 variables are being used, over 250 observations are made and the mean commonality

is greater or equal to .60. These criterion were met and three components with eigenvalues greater than one were extracted and accounted for 59% of the variance. A scree test further suggested that these components were meaningful.

Table 8 about here

While relational issues and the reputation of the TCM were both identified as being important store choice factors, the research also highlighted the importance of operational attributes such as price, product range, display and store location. This would suggest that in order to remain competitive TCM stores need to develop a reputation for trust and professionalism while at the same time maintaining a competitively priced and appropriate product range.

Given the competitiveness of the TCM industry and the increasing number of new market entrants, the research examined customers' perceptions of the different TCM formats (Table 9). In particular, the research sought to identify whether respondents perceived differences in the products and services offered by Mom and Pop and new modernised TCM halls.

The findings illustrate that modernised TCM halls were perceived as better in six out of the ten attributes, while for three factors the majority of respondents felt there was no difference. Mom-and-Pop TCM outlets were considered better in only one attribute - 'Merchandise Prices' (value for money).

Table 9 about here

6. Discussion and Conclusions

Over the last two decades, Singaporeans have witnessed the closure of numerous Mom-and-Pop owned TCM halls. Due to the Government's promotion of Western medical care since the 1980s, TCM is no longer considered the primary form of health care for the Chinese population. Moreover, the introduction of shopping malls in Singapore has changed the buying habits of consumers who prefer to shop in air-conditioned centres rather than in local housing estates. At the same time however, there has been a successful introduction of modernised TCM stores with updated practices and procedures. Despite changes in the external environment therefore, TCM continues to enjoy a certain level of popularity in Singapore.

The use of TCM would appear to cut across gender, age and income. The research identified slightly more female than male customers in most of the demographic categories. The majority of TCM customers were over 30 years old, while those in the 50+ age cohort had the greatest propensity to frequent of TCM halls. Traditional Chinese medicine is not as popular amongst younger consumers with almost half of the respondents under the age of 30 never having visited a TCM outlet.

In terms of the decision making process and the store patronage behaviour of the respondents, the research provided three main findings. First, when Singaporeans need medical care, regardless of the seriousness of their illnesses, their first choice is Western medication. TCM is seen as fulfilling an alternative set of needs, which relates to wellness, the improvement of health and the prevention of illnesses.

However when seeking treatment for minor ailments the research identified TCM users as having specific demographic characteristics. For example, respondents were more likely to be older (over the age of 50) with an income under \$3,000, they were less likely to have received a tertiary education and be either retired, a housewife or working in a blue collar occupation. The majority were most likely to be living in state supported housing rather than own their own homes or rent from the private sector. Such findings support both hypotheses that:

H1: Individuals will display a preference for Western health care formats when seeking treatment for a serious illness and this preference will be displayed amongst all respondents regardless of socio demographic background.

H2 Individuals seeking treatment for minor ailments will use a variety of health care formats and the pattern of usage will vary by socio demographic background.

Secondly, the research identified the criteria considered important when choosing a TCM. Respondents noted that factors such as the range and price of the merchandise and the location of the store all remained important. At the same time the development and creation of trust was identified as a central factor influencing the choice of TCM hall. The proliferation of both fake, sub-standard herbs as well as counterfeit proprietary formulations have been identified as being major obstacles that hinder consumers from buying Chinese medicine (Philip Securities 2003). Thus, it is perhaps unsurprising that the reputation of the TCM practitioner and the skills and competency of the staff remain determining criteria. As one respondent noted:

“The owner of the TCM shop will not cheat me. I am assured of the quality of the product as we have lived in the same neighbourhood for over 20 years.”

These findings would suggest that TCM decision making is trust orientated and that the level of trust placed in individual halls is still sufficiently important to affect store choice. This finding would seem to indicate that an offer based upon price alone would be insufficient in the Singaporean TCM market. Any value proposition would need to be accompanied by a reputation for trustworthiness on the part of the retailer. Therefore the hypothesis:

H3 The choice and patronage of TCM halls will be primarily based upon relational factors such as the knowledge displayed by store staff and the reputation of the practitioner.

is partly supported as the research identified that while relational factors remain important, store choice cannot be divorced from other operational criteria such as range, quality and price.

The third and final finding drawn from the research was that respondents did perceive differences between traditional and modern TCM halls. While the product mixes were seen to be similar and both formats competed for customers in the two most popular product categories (tonics and herbal drinks), the majority of respondents considered the modernised outlets to stock better quality merchandise and offer a wider range of products in a more physically attractive environment. The research also identified that despite the poor physical image of many Mom-and-Pop stores, a number of TCM

shoppers did express a preference for these outlets, most notably, older TCM customers who placed less importance on aesthetic factors. The fourth hypothesis would therefore appear to be supported.

H4 Respondents will perceive differences in the product offer and the levels of service provided in TCM halls depending upon the store format.

Finally, by understanding the behaviour, store choice criteria and expectations of respondents in Singapore, it is possible to comment upon the future challenges and threats to the traditional TCM hall. One of the distinctive features that differentiate Mom-and-Pop stores from that of more modern outlets is the provision of specialised, hand-picked herbal prescriptions. While some modern TCM stores also offer this service, it has remained a core strength of the more traditional outlet. However, as Schaumburg (2007) notes, many Singaporeans are now more concerned with convenience and value and these traits would seem to have extended to the TCM market. Some Chinese clinics have recognised this and have begun to offer a brewing service that removes the need to wait for herbal remedies to be picked, mixed and cooked at home.

The study also noted that TCM halls face competition from a number of new market entrants. Western pharmacies, supermarkets and convenience stores have all begun to stock TCM products and although the range is currently limited (primarily essences and tonics) the category as a whole is seen as having significant growth potential. In discussions with the Country Manager of one chain of Western pharmacies, it was noted that the company intended to increase its range of Chinese health products.

Similarly the Store Manager of a Health and Beauty retailer mentioned that TCM products have become extremely popular in certain branches and demand was being closely monitored. TCM outlets may therefore face increased competition from these channels in the coming decade.

In conclusion therefore, this study has provided an understanding of consumer behaviour with respect to TCM in Singapore. It has identified who purchases from these outlets and the types of products that are bought. Moreover it has detailed the reasons why individuals choose one type of TCM retailer over the other and commented upon the nature of competition within the sector.

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Table 1. Critical Store Attributes

Dimension of Store Image	Components
Merchandise	Quality, selection, style ,price
Service	Lay-by-plan, sales personnel, easy return, credit, delivery
Clientele	Customers
Physical facilities	Cleanliness, store layout, shopping ease, attractiveness
Convenience	Location, parking
Promotion	Advertising
Store Atmosphere	Congeniality, fun, excitement, comfort
Institutional	Store reputation
Post transaction	Satisfaction

Source: Neal et al (1999)

Table 2: Profile of respondents, TCM shoppers

Characteristics	Category	TCM Shoppers' Profile	TCM Shoppers' Profile
		(n)	(%)
Gender	Male	122	41.8
	Female	170	58.2
Age	19 & below	40	13.7
	20 – 29	36	12.3
	30 – 39	76	26.0
	40 – 49	70	24.0
	50 & above	70	24.0
Marital Status	Single	102	34.9
	Married	176	60.3
	Divorced/Widowed	14	4.8
Ethnic Group	Chinese	244	83.6
	Malay	14	4.8
	Indian	20	6.8
	Eurasian	14	4.8
Occupation	Managerial	72	24.7
	Clerical	94	32.2
	Blue Collar	38	13.0
	Housewife/retiree	36	12.3
	Student	52	17.8
Education	Secondary schools & below	128	43.8
	College Diploma	92	31.5
	First Degree	50	17.1
	Postgraduate Degree	22	7.5
Household Income	Less than S\$1000	44	15.1
	S\$1000 - S\$3000	110	37.7
	S\$3000 - S\$5000	60	20.5
	S\$5000 & above	78	26.7
Housing Types	HDB Flat	232	79.5
	Private Condominium	38	13.0
	Landed Property	22	7.5

Table 3 Preferred Healthcare Format (Serious Illnesses)

Serious Illness	N	Percentage	Ranking
Western Clinic / Western Hospital	238	81.5	1
Combination of Western & Chinese Clinic/Hospitals	50	17.1	2
Chinese Clinic / Chinese Hospitals	4	1.4	3
TCM Halls	0	0.0	4

Table 4. Preferred Healthcare Format (Minor Illnesses)

Minor Illness	N	Percentage	Ranking
Western Clinic / Hospital	132	45.2	1
Self medication Western Pharmacy	90	30.8	2
Self medication TCM Hall	58	19.9	3
Chinese Clinic	12	4.1	4

Table 5: Chi Squared test for significance, preferred format for minor illnesses

Variable	Value	sig	Cramers V
Gender	10.8	.013*	.013
Race	5.05	.168	.168
Age	15.59	.049*	.049
Marital Status	4.87	5.60	.560
Occupation	24.75	.002*	.002
Education	24.95	.000*	.000
Housing Type	15.6	.004*	.004
Income	23.43	.001*	.001

*Significant at 5% level

Table 6. Most frequently purchased product category

	Mom-and Pop TCM Halls	%	Modernised TCM Halls	%	Western Pharmacy	%
Product category	Tonic	35.6	Tonic	40.4	Medicine for minor ailments	58.2
	Special Prescription For Illness	24	Herbal drink	28.8	Toiletries	22.6
	Herbal drinks	20.5	Medicine for minor ailments	9.6	Special Prescription for Illness	8.2
	Medicine for minor ailments	14.4	Special Prescription for Illness	4.1	Tonic	2.1
	Toiletries	2.7	Toiletries	2.7		
	Never shop here	2.7	Never shop here	14.4	Never shop here	8.9

Table 7 Critical Store Choice Factors

Factors	Mean	Std. Deviation	Ranking
Staff Knowledge	4.22	0.873	1
Quality of Merchandise	4.12	0.794	2
Merchandise Prices	3.92	0.889	3
Store Reputation	3.76	1.011	4
Having In-house doctors	3.68	1.086	5
Range of Merchandise	3.60	0.834	6
Displays allow Browsing	3.50	0.823	7
Familiarity with Staff	3.40	0.992	8
Brands Carried by Stores	3.19	1.096	9
Store Promotions	3.12	0.855	11
Attractiveness of Stores	3.10	0.818	10
Located in Shopping Centres	2.94	1.003	12
Having Many Outlets	2.79	0.987	13
Class of Clientele	2.77	0.819	14

1=not important at all” and “5=very important

Table 8. Principal Component Analysis for Store Choice Factors⁴

Component	Factors	Factor loading
Operations	Displays allow Browsing	.794
	Located in Shopping Centres	.718
	Range of Merchandise	.699
	Having Many Outlets	.587
	Merchandise Prices	.481
Reputation	Class of Clientele	.764
	Store Reputation	.734
	Attractiveness of Stores	.702
Relational	Staff Knowledge	.736
	Familiarity with Staff	.699
	Having In-house doctors	.688

⁴ The variables of 'Brands' Store Promotions and Merchandise Quality' provided a meaningful loading upon more than one component and were omitted before the PCA analysis was repeated.

Table 9: Respondents perception of TCM by format

TCM Halls	Mom-and-Pop %	Modernised %	No difference %
Merchandise prices (value for Money)	64.4	21.9	13.7
Physical attractiveness of Hall	3.40	78.8	17.8
Wide variety of products	18.5	59.6	21.9
Reputation of Hall	24.0	56.2	19.9
Special sales or promotions	18.5	56.2	25.3
Quality of merchandise	22.6	52.1	25.3
Allow one to browse and select the items	23.3	51.4	25.3
Language	17.8	39.7	42.5
Friendly staff	30.8	28.8	40.4
Product knowledge of the staff	36.3	26.7	37.0

Figure 1 Singapore TCM Market Structure

