

**CONSUMERS PERCEPTION ON GENERIC DRUGS IN
BANGKOK, THAILAND**



**A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF MANAGEMENT
COLLEGE OF MANAGEMENT
MAHIDOL UNIVERSITY
2016**

COPYRIGHT OF MAHIDOL UNIVERSITY

Thematic paper
entitled
**CONSUMERS PERCEPTION ON GENERIC DRUGS IN
BANGKOK, THAILAND**

was submitted to the College of Management, Mahidol University
for the degree of Master of Management

on
May 8, 2016



.....
Mr. Natt Tanpradit
Candidate

.....
Suparak Suriyankietkaew,
Ph.Ds.
Advisor

.....
Asst. Prof. Winai Wongsurawat,
Ph.D.
Chairperson

.....
Assoc. Prof. Annop Tanlamai,
Ph.D.
Dean
College of Management
Mahidol University

.....
Benjalux Sakunasingha,
D.B.A.
Committee member

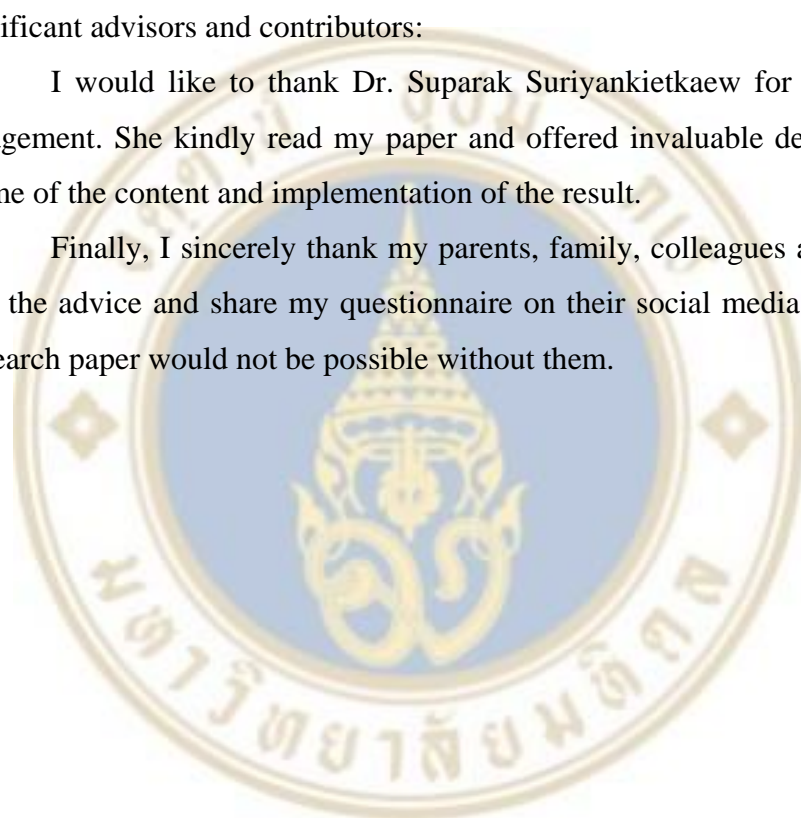
ACKNOWLEDGEMENTS

This research paper is made possible through the help and support from everyone, including parents, teachers, family, friends, colleagues and in essence, all sentient beings. Please allow me to dedicate my acknowledgment of gratitude toward the significant advisors and contributors:

I would like to thank Dr. Suparak Suriyankietkaew for her support and encouragement. She kindly read my paper and offered invaluable detailed advice on the theme of the content and implementation of the result.

Finally, I sincerely thank my parents, family, colleagues and friends, who provide the advice and share my questionnaire on their social media. The product of this research paper would not be possible without them.

Natt Tanpradit



CONSUMERS PERCEPTION ON GENERIC DRUGS IN BANGKOK, THAILAND

NATT TANPRADIT 5749185

M.M. (MARKETING AND MANAGEMENT)

THEMATIC PAPER ADVISORY COMMITTEE: SUPARAK SURIYANKIETKAEW, Ph.Ds., ASST. PROF. WINAI WONGSURAWAT, Ph.D., BENJALUX SAKUNASINGHA, D.B.A.

ABSTRACT

The use of the generic drug in Thailand is increasing each year continually in both drugstore and hospital channel. The primary factor is restricted in the budget. Perceptions of the generic product in Thailand are not yet measured. This research aim to explore consumer' perception in the generic drug in quality, price, value, and risk in compare with the original brand. The research uses the qualitative method to gather and analysis information for the consumer in Bangkok, Thailand. The questionnaire explored in consumer behavior, understanding in the definition of a generic drug, the perception of quality, price, value and risk and demographic data. 135 consumers surveyed by online questionnaire. Most of the participants do not understand the definition of generic drug. The respondents confused generic drug and household drug. Doctor and pharmacy are that sources of information that people trust. Most respondents perceived that generic drug had lower in price and same in quality, value, and risk. On the other hand, incorrect group, respondents' perception that generic drug has lower in price, quality, higher and same in risk with higher in value. In summary, knowledge and perception of the generic drug may be lacking among consumer. Development of consumer education on generics by healthcare providers and government would support people' health

KEY WORDS: Generic Drug, Perception, Quality, Price, Value and Risk

29 pages

CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
CHAPTER I INTRODUCTION	1
1.1 Background	1
1.2 Objective	1
1.3 Introduction	1
CHAPTER II LITERATURE REVIEW	3
2.1 Consumer Perception	3
2.1.1 Consumer's perception of generic product	4
2.1.2 Consumer perception on pharmaceutical product and generic drug	5
2.1.3 Pharmaceutical situation in Thailand	5
2.2 Definition	6
2.2.1 Generic drug	6
CHAPTER III RESEARCH METHODOLOGY	8
3.1 Research Design	8
3.2 Data Collection Methodology	9
3.2.1 Population	9
3.2.2 Sampling	9
3.2.3 Data Collection	9
3.3 Data Analysis	10
CHAPTER IV RESEARCH FINDINGS AND ANALYSIS	11
4.1 Finding	11

CONTENTS (cont.)

	Page
CHAPTER V CONCLUSIONS	19
5.1 Conclusions	19
5.2 Implication	19
5.3 Limitation and recommendation for future research	20
REFERENCES	21
APPENDICES	24
Appendix A : Questionnaire	25
BIOGRAPHY	29



LIST OF TABLES

Table		Page
4.1	Characteristics of respondent	11
4.2	Comparative analysis of respondents who answer correctly (n = 27) and wrongly (n = 99)	14



LIST OF FIGURES

Figure	Page
4.1 Frequency for purchasing drug	13
4.2 Drug that respondent buy	13
4.3 Perceives definition of generic drug from respondents	14
4.4 Source of generic drug information	15
4.5 Factors that make generic drug acceptable	15
4.6 Perception of quality	16
4.7 Perception on price	17
4.8 Perception of value	17
4.9 Perception of risk	18



CHAPTER I

INTRODUCTION

1.1 Background

In Thailand, the use of the generic drug has been increasing; major factors are cost concerns, government policy and marketing activity of local manufacturers. Attitude and perception of the generic drug in Thailand have not yet been measured.

1.2 Objective

The study aims to find consumer's attitude and perception on issues relating to generic medicines in Bangkok, Thailand

1.3 Introduction

Spending in drug sector is the largest expenditure in the healthcare sector as increasing of population, urbanizes, sedentary lifestyle and changing the pattern of the population to aging society. The Thailand health care system can be divided into the public and private sector. In the public sector, coverage consists of three systems as Civil Servant Medical Benefit Scheme(CSMBS) for government employees (5.4% of Thailand population in 2014) , Social Security Scheme (SSS) for private employees (13.6% of population in 2014) And Universal Coverage Scheme (UC) for Self-employed and the rest of the population not covered by Consumer and SSS(48.8% of population in 2014). In SSS and UC, most medicines are generic medicine due to a strict budget. The patient would be dispensed either generic drug, or original drug depended on hospital listing. In the private sector, drugs also prescript mostly as the original brand. In the present, tight budget in drug purchasing makes public sector purchase more in the generic brand. The original brand manufacturer also produces their generic drug as the branded-generic drug (Sandoz, affiliated company of Novatis, is the manufacturer of

branded generic drug). The local manufacturers are improving in quality and marketing activity that help them gain reputation. In Thailand, pharmaceutical market size is estimated approximately 180,000 million THB in 2015 annually and expected to rise to 240,000 million THB within 2018. Generic drug shares nearly 20% and continually growth quickly due to government policy and economic regression. In hospital channel, doctor and hospital pharmacist are in charge in choosing drug item for hospital drug list. This study aims to explore customers' perception on generic drug, on quality, price, value and risk and their reason for choosing them.



CHAPTER II

LITERATURE REVIEW

2.1 Consumer Perception

Consumer perception defined as consumer's impression, awareness and consciousness of product that create form advertising, reviews, public relations, social media, personal experiences and other channels (Businessdictionary, 2016). The consumer uses the perception as the process of selection, organized Consumer can perceive one product in many dimension as self-perception, price perception, benefits perception (Blank, n.d.) and risk perception (Dontigney,n.d.). In healthcare product, quality, price, and value are the primary factors that consumer perceive for their judgment. Quality is seen as superiority or overall excellent in consumer's' opinion. The consumer's perception of quality has a relationship with buying behavior and brand loyalty (Nguyen, 2011). In choosing the process, the quality perception is the indicator that consumer use for alternative quality evaluation. The perception as price, brand name, retailer reputation, and level of advertising are the key extrinsic signals that consumer use to perceive quality and value (Olson, 1977). Price is what consumer sacrificed to obtain the product. In consumer perception of sacrifice, monetary cost, time cost search cost, and psychic cost are combined to get the products. Price the is also the indication of quality but depend on availability, price variation, product quality in the category, the level of price awareness and consumer's ability to detect quality variation. Price can be considered as the quality indication or extrinsic signal for the consumer. In term of value, the pattern of consumer's perception can be grouped into four group as value is low price, the value is whatever I want in a product, the value is quality I get for the price I, pay and value is what I get for what I give (Zeithaml,1988). Consumer's satisfaction is affected by the perception of quality and satisfaction affects behavioral intentions (Gotlieb et al, 1994). Consumer's intention to purchase relates to the quality of the product in the positive way (Zeithaml, 1988). In negative perception, the consumer may deny or resistance to the product. Consumer resistance means that consumer continuously against or escapes from a dominant

factor as specific person, behaviors, and devices (Roux, 2007). The consumer may express resistance to the product in the range from avoiding use, lowering consumption to company's boycotts (Fournier 1998). Consumer perceives and evaluates risk in many dimension (e.g. Financial risks, performance risk, physical risk, time risk, social risk and psychological risk.) (Anas, 2013).

2.1.1 Consumer's perception of generic product

In the generic product that price usually lower than the original product. The lower price is the reason to make the generic product attractive (Ugur, 1987). The perception of a generic product varies in the different group of consumer. In general, most consumers has a positive view of the generic product. (Prendeergast and Marr, 1997). In high-income, consumer perceives that generic product is lower quality and take more risk than the original product. In contrast, the lower-income consumer is attracted the by the price reduction of generic product compared to brand items (Yelkur, 2000). Consumer perception varies to generic product category In generic commodity product or more standardized product, and consumer tends to be perceived as higher quality and value than less standardized or more specialty product (Prendeergast and Marr, 1997). In personal care sector, generic products are less attractive because the consumer has less confidence in the generic product. The growth of generic product depends on many factors as economic situation and marketing strategy. Economic conditions as high inflation rate drive the generic product to be more attractive. Portion and number the of the lower-income consumer in developing countries are also the keys that make the generic product attractive. Product strategy the of a generic product is the another key factor. Despite price reduction strategy of generic product, investment in advertising and branding are the keys to creating consumer confidence and trust. Successful generic brand would invest in promoting the brand to build consumer confidence in quality (Yelkur, 2000). Advertising and marketing communication are the tools to drive selective need recognition of the generic brand and make one generic brand stronger than the other generic in consumer recognition (BlackWell, 2012)

2.1.2 Consumer perception on pharmaceutical product and generic drug

Pharmaceutical product is unsought goods that related to health. Quality, efficacy, and reliability are the necessary factors for drug selection. In consumer decision process model (BlackWell, 2012), physician and pharmacist take the role in the search for information and pre-purchase evaluation step in hospital channel. However, in the drugstore, community pharmacist takes the role for product selection in drug class and molecule and consumer take a role in brand selection the for the Over-The-Counter drug. In pharmaceutical product, efficacy perception is the major factor to create consumer value perception. Efficacy perception lead to intention to buy and drug adherence that may result in brand switching (Veronik, 2014). In generic drug, consumer perception of risk is the perception that must be concerned with each dimension. Financial risk occurs when the generic drug does not match with consumer demand that makes financial lost on drug cost. Consumer perceives performance risk as the performance of product not perform as they expect or product cannot the delivery benefit to fulfill the demand.

Physical risk is the danger or harmful to consumer's health in using the drug. Wasting time in the process of searching and buying the generic drug is the time risk and time in switching product is defined as time risk. The social risk of the consumer is the rejection in group member of the consumer after using the generic drug. In psychological risk, consumer develops this risk as receive incomplete or inexact knowledge of the generic drug (Anas, 2013). In the past, many researches, result about perception in generic drug was variety on many factors (Health care professionals' perception of generic drug, suggestion, price gap, patient's education and knowledge

2.1.3 Pharmaceutical situation in Thailand

In pharmaceutical and healthcare product that are specialty product and related to human life. Healthcare provider as physicians and pharmacist are the key player in product selection but depend on the healthcare system, law, regulation and healthcare policy of the country. In Thailand, physician and pharmacist are the key players for drug selection. However, in the drug store section, patient as end consumer can select the drug with consulting from the pharmacist. In the present, the pharmaceutical industry in Thailand value approximately \$4.5 billion in 2014 and be estimated to be

\$9 billion in 2020 (Gross,2014). All people are covered with universal healthcare system that divided to three programs as the Civil Servant Medical Benefit Scheme (for government employee, 7million people), Social Security Scheme (for private firm employee,10 million people) and Universal Coverage Scheme as free basic health care coverage (for the rest,50 million people). Thai government spends 14% on healthcare that more than many European countries (Gross, 2014). In healthcare spending, the largest portion is drug budget. The number of the generic drugs has been growing over the past decade since the introduction of the Universal Coverage Scheme. Thai FDA (TFDA) take the role in regulatory of drugs in Thailand in all process as drug licensing, inspection, registration and post-market surveillance. Generic drug applications should include material on quality control, general product information, and product manufacturing. New generic drug applications should include a full set of the generic dossiers as well as bioequivalence study data and literature that supports efficacy and safety (Gross, 2014). Local manufacture shares about 28% of pharmaceutical product in both hospital and drugstore sector. In Thailand, multinational companies are the top player; only three local companies are in top 10 of leading manufacture. Generic drugs have higher share than original product in some therapeutic class as antibiotic and drug for heart disease. (IMS data, 2015)

2.2 Definition

2.2.1 Generic drug

WHO defines the generic drug as a pharmaceutical product that can be used interchangeably with innovator or original product. A generic drug is produced without license or patent from innovator and usually marketed after the end of patent or exclusive right(WHO,n.d). The generic drug must have the active ingredient in the same amount as the originator. Moreover, a generic drug must be same dosage form, safety, strength, route of administration, quality, performance characteristics and indication. Bioequivalent is the most important criteria that generic drug should be achieved. All generic can be marketed after approved by Food and Drug Administration (Bureau of Drug Control, n.d) As no license fee, most of the generic drug price are

lower than drug original. A generic drug is not counterfeit or fake drug (WHO,n.d). In Thailand, most Thai consumers call generic drug as local made because local manufacture produces most of the generic drug in Thailand. However, in the present some originators also produce own generic brand as the fighting brand and multinational generic manufacturer also came to Thailand. In Thailand Food and Drug Administration's definition, the generic drug is the active ingredient that register as the second brand for same ingredient (Bureau of Drug Control, n.d). Even innovator company register in the second order, it would be count as generic.



CHAPTER III

RESEARCH METHODOLOGY

The purpose of this research is finding the perception of the consumer on the generic drug in Bangkok in the dimension of quality, price, value and risk compare to original drug and finding which group of consumer that have knowledge in generic drug.

3.1 Research Design

This research will explore the perceptions of the Bangkok consumer in generic drug. This research was mainly divided into two parts as perception generic drug and demographic of the respondent.

1. Perception on generic drug

- Understanding of generic drug
- Consumer behavior in buying drug
- Perception of generic drug compares to original brand in quality, value, price and risk

2. Demographics of Consumer

The result would be a benefit in consumer behavior analysis for marketing and business strategy of the generic drug company, original pharmaceutical company, and organizations that may concern.

The result would be analysis by SPSS method to find the relationship between each variable and consumer perception. This survey is designed as Thai languages based to help respondent understanding and widely access to the target population.

3.2 Data Collection Methodology

3.2.1 Population

This research focuses on the consumer who lives in Bangkok area and near. As this research was online questionnaire approach, the target group of the population should be able to access the internet or social media. This survey was opened to general people no matter how they know or have the experience with the generic drug. The study is not set to limit the age, income, occupation, married status, beyond having internet access.

3.2.2 Sampling

Non-probability sampling as internet convenience samples or unrestricted self-selected surveys is used in this research due to short collection period and convenience of the respondent to access the questionnaire. The total sample size was around 100 respondents. As pilot survey and size of research, location is the limit to Bangkok and nearby only to avoid the bias of public health system and propaganda of pharmaceutical firm.

3.2.3 Data Collection

Data collection conduct with the online close-end questionnaire based in Google form 2016 version. Data collection was separate to 5 part as screening of the location, understanding of generic drug, drug using pattern, how respondents get information of generic drug, perception on generic drug, and demographic of respondent consequently

1. Screening of the location: screening question would select only target group of respondent which live in Bangkok and nearby
2. The testing question of the generic drug would test understanding of generic that respondent know the wording as the generic drug in Thai language or not and find out the definition of wording that respondent know in both formal and informal term. The respondent can choose many answers that they think it matches with the definition. The answer also adds incorrect answer as fake drug and substitution drug in the same indication

3. Consumer behavior question would find out the pattern of behavior infrequently and which group of drug that consumer purchase.

4. The experience of the consumer about generic drug question that explores that consumer has experience in generic drug or not and which factor that makes consumer accept the generic drug.

5. Perception in generic drug question will find out in detail about perception in quality, price, value to money and risk comparing to the original brand. Respondent would answer as better, equal, worse or don't know in each perception.

6. The demographic question would collect the general information of the defendant as age, education level, income, occupation, marital status, children and also find out that respondent is a healthcare professional or not. These question designed to determine the relationship between demographic that may affect the perception

The online survey was shared on the social network to target respondent. Total respondent is set as around 100. See questionnaire in appendix part.

3.3 Data Analysis

The result would be analyzed by Google from version 2016 and SPSS method in PASW Statistics 18 program. Google form report in term of summary in each question. The method is frequency analysis, cross-tabulation. Frequency analysis would use to summarize the behavior and demographic data. Cross-tabulation is used to find out the relationship between nominal data.

CHAPTER IV

RESEARCH FINDINGS AND ANALYSIS

4.1 Finding

After closing online questionnaire, Total respondents are 135 people. Ten people were excluded from the result of living outside Bangkok and nearby area. Remaining for analysis are 125 respondents. Demographics of respondent were shown in following

Table 4.1 Characteristics of respondent

	n	%
Gender		
Male	35	27.8
Female	91	72.2
Age		
Below 17 yr.		
17-22 yr.	0	0.0
22-30 yr.	51	40.5
31-40 yr.	58	46.0
41-50 yr.	5	4.0
51-60 yr.	2	1.6
above sixty yr.	10	7.9
Education level		
Primary school	0	0.0
Secondary school	0	0.0
College	0	0.0
Bachelor degree	73	57.9
Master degree or higher	53	42.1

Table 4.1 Characteristics of respondent (cont.)

	n	%
Personal Income per month		
No Income	7	5.6
Below 10,000 THB	2	1.6
10,001-20,000 THB	6	4.8
20,001-30,000 THB	21	16.7
30,001-40,000 THB	22	17.5
40,001-50,000 THB	22	17.5
Above 50,000 THB	46	36.5
Occupation		
Government employee	13	10.3
Private employee	84	66.7
Own business	12	9.5
Student	9	7.1
Housewife	5	4.0
Retire	3	2.4
Marital status		
Single	96	76.2
Married	29	23.0
Devote	1	0.8
Children		
Have	106	84.1
Not Have	20	15.9
Healthcare Professional		
Yes	38	30.2
No	88	69.2

Most of the respondent are female in 31-40-year-old. The education level of respondents is high as all of them have a bachelor degree. 26.9% of respondent are a healthcare professional. Their monthly personal income is greater than 50,000 THB

that can categorize as high income. Most of the defendant are a private employee. 66.4% of them are single.

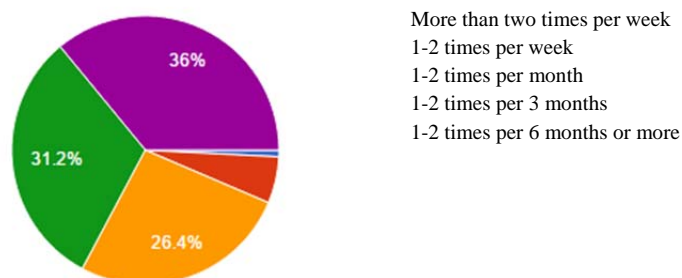


Figure 4.1 Frequency for purchasing drug

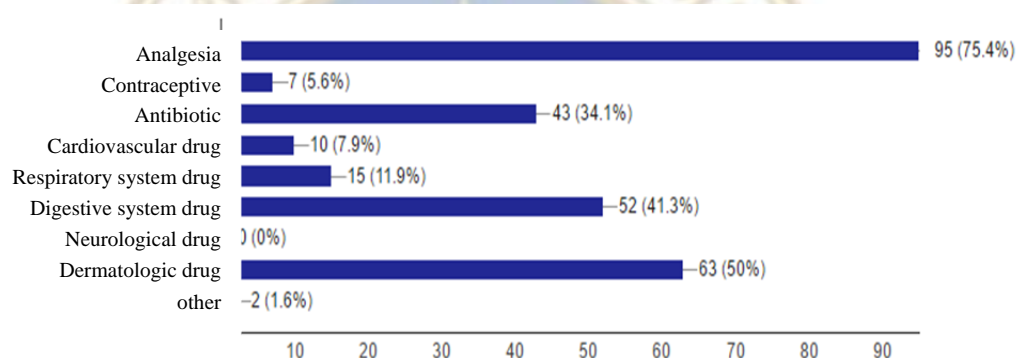


Figure 4.2 Drug that respondent buy

In consumer behavior aspect, majority of respondent (36%) purchase drug 1-2 times per 6 months and analgesia, drug for digestive system and skin are the top three that consumer purchase (75.4%, 50%, and 41.3%, Respectively)

As using frequency analysis, 96% of respondents present that they know generic drug. However, when to ask in depth in the definition of the generic drug in multiple checks as they want. 59.2% of respondents think that generic drug is household or non-prescription drug. The exact definitions of generic drug are "Drug that has the same ingredient and uses in same indication", "Copy drug" and "Drug that produced in the country". Only 21.43% answer right definition. Healthcare professional group is the only group that respondent answer corrects more than the wrong (55.26% and 44.74%, $p=0.00$). In the most of the demographic group, the wrong answer is more

than correct with no significant ration between the group except sex and having children ($p = 0.044$ and $p = 0.011$, respectively). In respondent who declare that know generic drug, only 22.31% of this group answer the right definition.

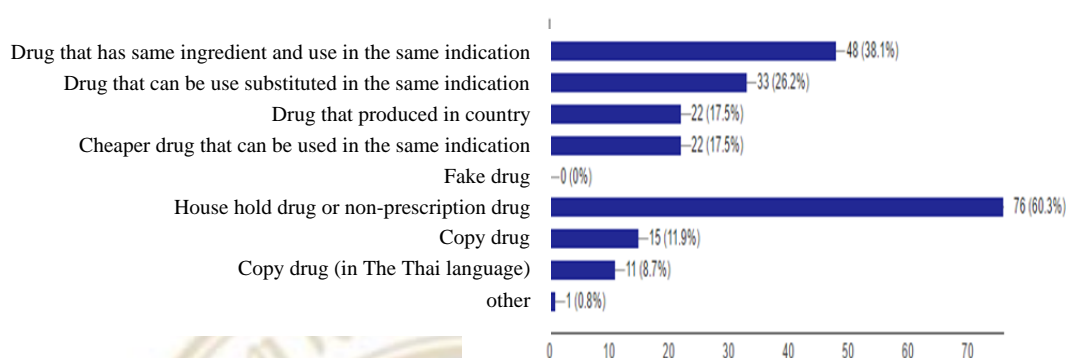


Figure 4.3 Perceives definition of generic drug from respondents

Table 4.2 Comparative analysis of respondents who answer correctly (n = 27) and wrongly (n = 99)

Respondent	Wrong Response		Correct Response		
	n	%	n	%	
Total	99	78.57	27	21.43	
Gender					p=0.044
Male	30	90.91	3	9.09	
Female	69	74.19	24	25.81	
Age					p=0.194
Below 17 yr	0	0.00	0	0.00	
17-22 yr	0	0.00	0	0.00	
22-30 yr	37	72.55	14	27.45	
31-40 yr	44	77.19	13	22.81	
41-50 yr	6	100.00	0	0.00	
51-60 yr	2	100.00	0	0.00	
above 60 yr	10	100.00	0	0.00	
Education level					p=0.300
Primary school	0	0.00	0	0.00	
Secondary school	0	0.00	0	0.00	
Colleage	0	0.00	0	0.00	
Bachelor degree	55	75.34	18	24.66	
Master degree or higher	44	83.02	9	16.98	
Personal Income per month					p=0.898
No Income	6	85.71	1	14.29	
Below 10,000 THB	2	100.00	0	0.00	
10,001-20,000 THB	5	83.33	1	16.67	
20,001-30,000 THB	17	85.00	3	15.00	
30,001-40,000 THB	17	80.95	4	19.05	
40,001-50,000 THB	16	76.19	5	23.81	
Above 50,000 THB	36	73.47	13	26.53	

Table 4.2 Comparative analysis of respondents who answer correctly (n = 27) and wrongly (n = 99) (cont.)

Occupation					p=0.719
Government employee	10	71.43	4	28.57	
Private employee	64	77.11	19	22.89	
Own business	10	83.33	2	16.67	
Student	7	77.78	2	22.22	
Housewife	5	100.00	0	0.00	
Retire	3	100.00	0	0.00	
Marital status					p=0.211
Single	72	75.00	24	25.00	
Married	26	89.66	3	10.34	
Devote	1	100.00	0	0.00	p=0.011
Children					
Have	20	100.00	0	0.00	
Not Have	79	74.53	27	25.47	p=0.000
Healthcare Professional					
Yes	17	44.74	21	55.26	
No	82	93.18	6	6.82	

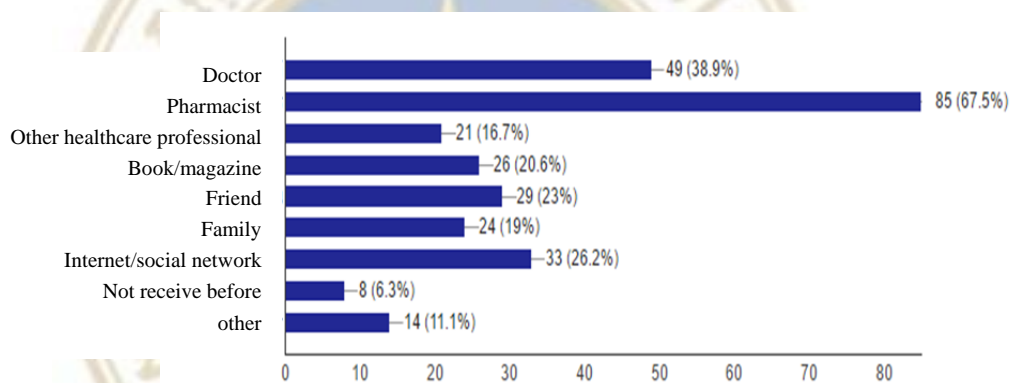


Figure 4.4 Source of generic drug information

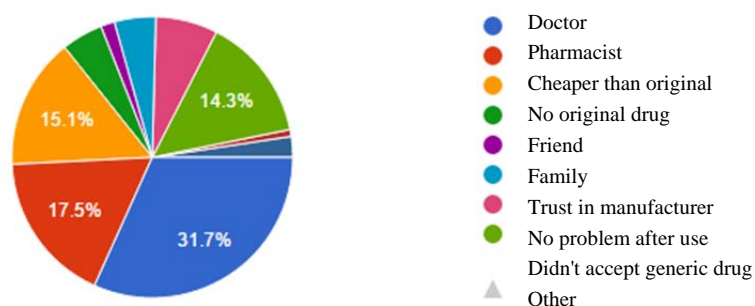


Figure 4.5 Factors that make generic drug acceptable

The pharmacist and doctor are the primary source of the information for respondent as 67.5% and 38.9%, respectively. However, correct answer rate is 26.44% and 18.75%, respectively. Other healthcare professional is the third rank of information as 16.7%, but the right rate is the highest as 30%. Physician and pharmacist are the most importance factor to get the consumer accept in the generic drug as 31.7% and 17.5% respectively. Price is the third rank as 15.1%. However, in the correct answer group, price in the most importance factor as 37.04%.

In quality perception aspect, the majority of 41.2% of respondent perceive that generic drug has same as the original drug. However, in the correct answer group, the majority of 52% perceive that generic drug is inferior to original drug with 42% perceive as same quality. In healthcare professional, 66% sees as inferior compare to 23.86% in health professional group ($p=0.00$). Rest of the demographic group perceives generic drug as same quality.

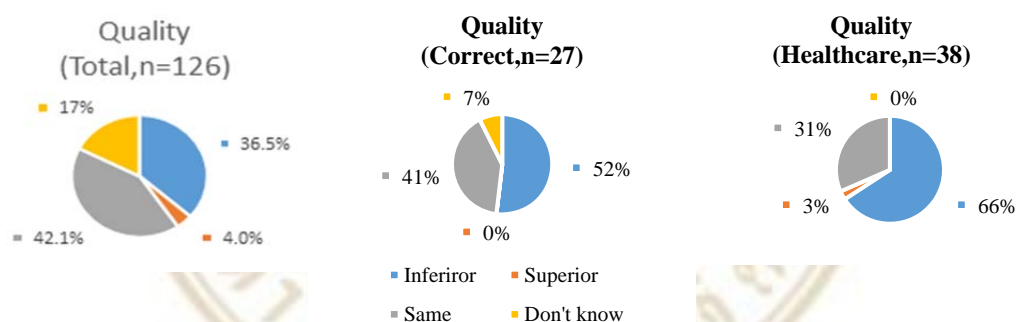


Figure 4.6 Perception of quality

In price perception, all groups have the same perception that generic drug have the lower price than the original one. However, incorrect answer group and healthcare professional group, no one perceives that generic drug has same or higher price. Only in healthcare provider group that respond significantly differently from non-healthcare professional ($p=0.00$).

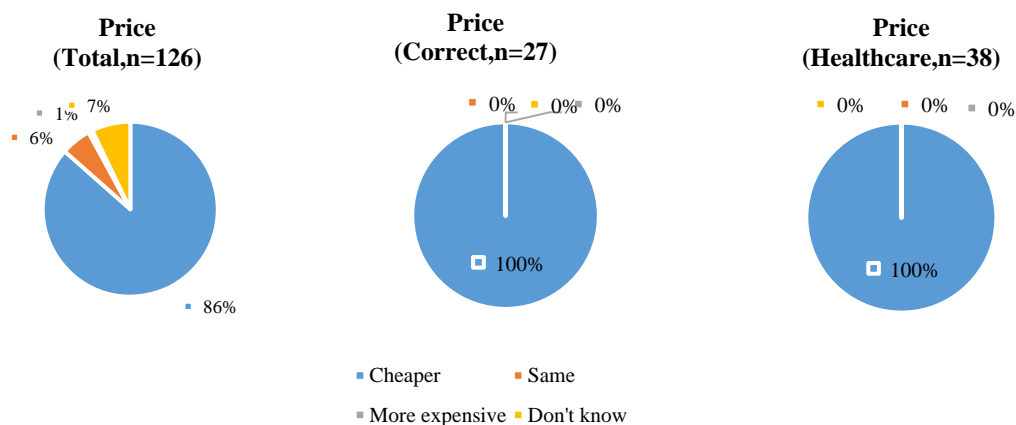


Figure 4.7 Perception on price

For the value perception, the majority of 31% of respondent perceive that generic product has the same value as original one. However in right answer group, 56% of respondent have the perception that generic product have more value than original brand ($p = 0.02$). Healthcare professional is also the one group that have perception differently significant from other groups ($p = 0.004$).

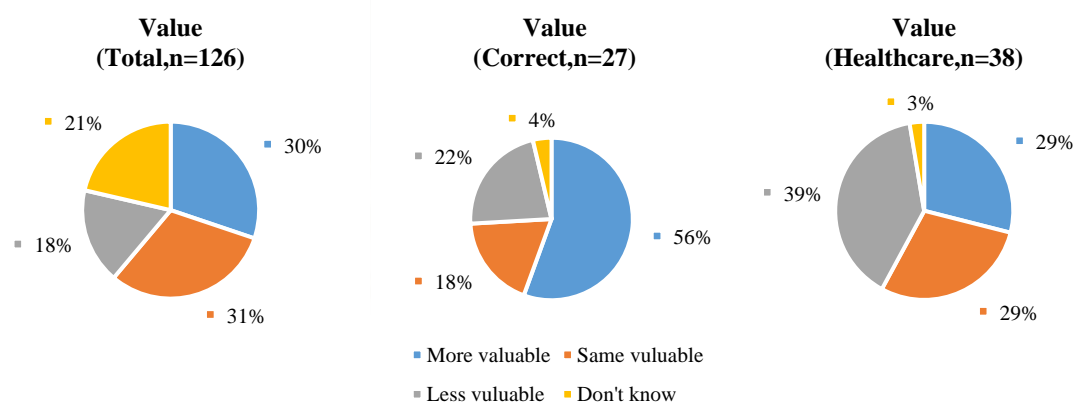


Figure 4.8 Perception of value

Risk perception, most respondent as 44% of respondent concern as the same risk as the original drug. In right answer group, respondent perceives as more risk and same risk in equal proportion. In the other hand, healthcare professional group view that generic drug is riskier than the original. For the risk perception, healthcare provider, and bachelor degree group are the groups that think more risk for generic drug and

result are significantly different from other groups($p=0.023$ and $p=0.039$, respectively). On the other hand, the correct answer group's result only tends to be the difference as $p = 0.069$.

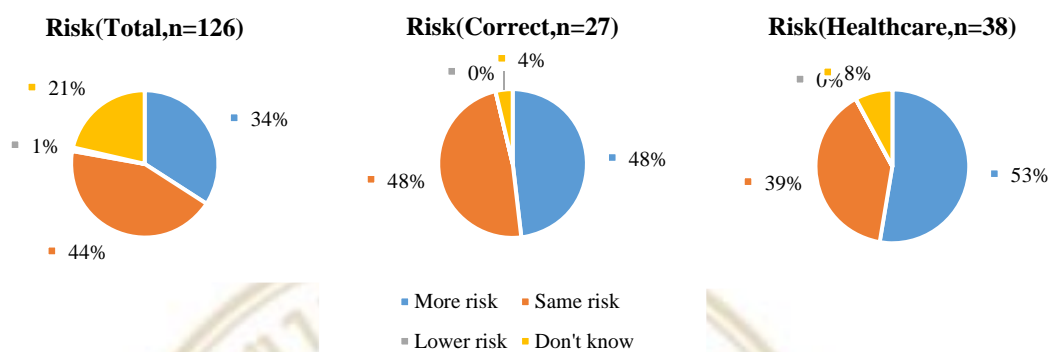


Figure 4.9 Perception of risk

CHAPTER V

CONCLUSIONS

5.1 Conclusions

In Bangkok, people usually buy analgesia and dermatologic drug at rate 1-2 time per 3-6 month or more. Majority respondent is single in age 31-40-year-old and works in a private firm with the non-healthcare background. Their personal income is more than 50,000THB per month. Most of the people realize that they know the generic drug. However, only one in five can give right definition of generic drug. Most people answer that generic drug is the household drug. Only half of health care professional give the correct answer. Pharmacist and Doctor are the sources of generic drug information in consumer's mind. Pharmacist, Doctor, and price differentiation are the key factor to make consumer accept in generic drug. The majority of people perceive that generic have the same quality, value and price but lower in price when to compare to the original brand. However, in the correct answer group, people have the perception that generic drug has lower in quality and price, but higher in value. However, in risk, people perceive as same and riskier in the same portion.

5.2 Implication

From the result, as lack of understanding of generic drug in general people, the government should give information and educate the society about the definition of the generic drug for wording "generic drug" in Thailand. Generic drug education should be packed up in primary health education course as people should know the generic name for the household drug. This education will help people to take care themselves and reduce the cost of treatment. In fact, every generic drug must pass Thai FDA criteria in quality standard, moreover, in some particular drugs should have interchangeability product equivalence. Thai FDA also has Quality assurance for locally made drug and "Green book" that contain name list of the generic drug and manufacturer that pass

quality control. However, the purpose of the green book is for hospital enlisting. Thai FDA should provide this information to the public in a user-friendly format to help people have the right perception of quality and risk of the generic drug.

For healthcare provider side, as pharmacist and doctor are the most reliable source of information in patient's mind. Doctor and pharmacist should be courage to give both generic name and trade name in prescript drug. Brief detail of about generic drug and differentiation should also be provided to patient from the better understanding.

In manufacture point, manufacture should practice more intergrade marketing communication for help reputation in quality, value, and risk. Even though many classes of drug is prohibited from advertising directly to public but the manufacturer should promote in the particular brand image. In the present, most of the top local manufacturer focus to hospital channel or advertise to healthcare professional. In the other hand, original brands also have to promote their brand image to keep the position in the market and create more gap in quality, value, and risk from the generic brand.

5.3 Limitation and recommendation for future research

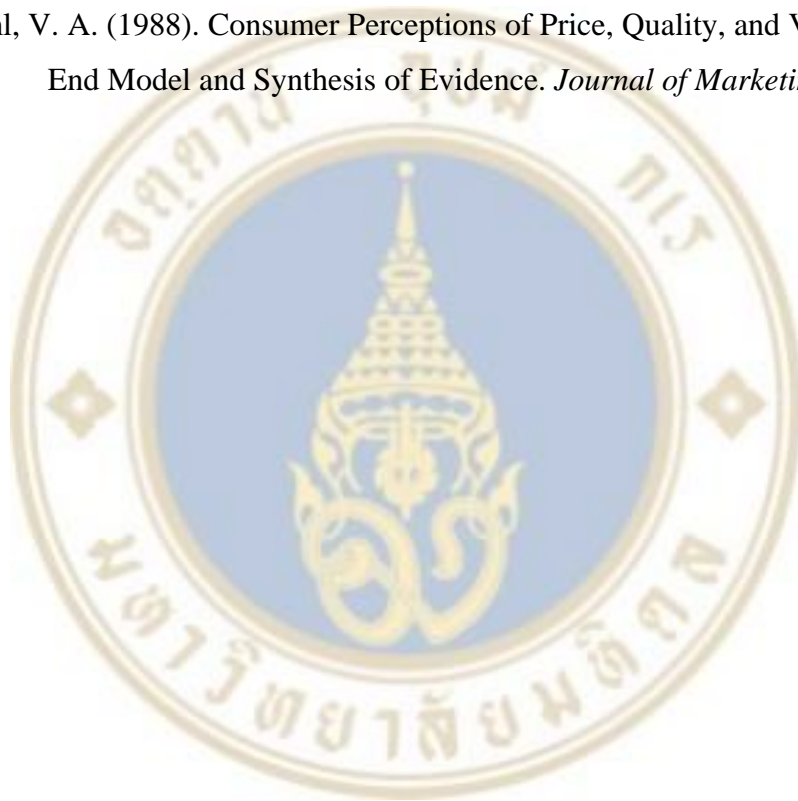
This research has the limitation in time, sample size, scope of research and sample method. To increase the accuracy of the result, research should gather information in larger sample size and use probability sampling method or weight the data to avoid bias or outstanding result. More question should be added to finding more detail and accuracy. This research uses the only digital channel to reach the respondent, so some people that can't access or don't use the internet would miss in this survey. Health care professional should be separate in another research with more question about giving information to the patient. As this research survey in non-specific in generic drug brand, so sample picture of the generic drug was not provided to respondent. Perception in particular generic brand and intention to buy should be conducted in further research.

REFERENCES

- Abzakh, A. A., Ling, K. C., & Alkilani, K. (2013). The Impact of Perceived Risks on the Consumer Resistance towards Generic Drugs in the Malaysia Pharmaceutical Industry. *IJBM International Journal of Business and Management*, 8(3).
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2012). *Consumer behavior*. Singapore: Cengage Learning.
- Blank, C. (n.d.). *Consumer Perception Theory*. Retrieved February 04, 2016, from <http://smallbusiness.chron.com/consumer-perception-theory-40176.html>
- Bureau of drug control. (n.d.). *The procedure of Generic Drugs Registration*. Retrieved from http://drug.fda.moph.go.th/eng/zone_regis/registration01.asp
- Chua, G. N., Hassali, M. A., Shafie, A. A., & Awaisu, A. (2010). A survey is exploring knowledge and perceptions of general practitioners towards the use of generic medicines in the northern state of Malaysia. *Health Policy*, 95(2-3), 229-235.
- Customer perception. (n.d.). Retrieved February 4, 2016, from <http://www.businessdictionary.com/definition/customer-perception.html>.
- Dontigney, E. (n.d.). *Types of Perceived Risk*. Retrieved February 04, 2016, from <http://smallbusiness.chron.com/types-perceived-risk-71594.html>
- Fournier, S. (1998). Consumers and Their Brands: Developing Relationship Theory in Consumer Research. *J CONSUM RES Journal of Consumer Research*, 24(4), 343-353.
- Generic Drugs. (n.d.). Retrieved February 25, 2016, from <http://www.who.int/trade/glossary/story034/en/>
- Gotlieb, J. B., Grewal, D., & Brown, S. W. (1994, December). Consumer satisfaction and perceived quality: Complementary or divergent constructs? [Abstract]. *Journal of Applied Psychology*, 79(6), 875-885.

- Gross, A. (2014, April 11). *Thailand pharmaceutical market update 2014* [Web log post]. Retrieved from <http://www.pharmaphorum.com/articles/thailand-pharmaceutical-market-update-2014>
- Herstein, R., & Tifferet, S. (2007). An investigation of the new generic consumer. *Journal of Consumer Marketing*, 24(3), 133-141.
- Ilyuk, V., Irmak, C., Karmer, T., & Block, L. (2014). *Innovation and Marketing in the Pharmaceutical Industry Emerging Practices*. Research, and Policies. New York, NY: Springer New York.
- Kjoenniksen, I., Lindbaek, M., & Granas, A. G. (2006). Patients' attitudes towards and experiences of generic drug substitution in Norway. *Pharm World Sci Pharmacy World & Science*, 28(5), 284-289.
- Kobayashi, E., Karigome, H., Sakurada, T., Satoh, N., & Ueda, S. (2011). Patients' attitudes towards generic drug substitution in Japan. *Health Policy*, 99(1), 60-65.
- Moss, G. and Schuiling, I. (2003). A brand logic for pharma: a possible strategy based on FMCGexperience. *International Journal of Medical Marketing*, 4(1), 55-62.
- Nguyen, T. D., Barrett, N. J., & Miller, K. E. (2011). Brand loyalty in emerging markets. *Marketing Intelligence & Planning Marketing Intelligence & Plan*, 29(3), 222-232.
- Olson, J.C. (1977), "Price as an informational cue: effects on product evaluations", in Woodside, A.G., Sheth, J.N. and Bennett, P.D. (Eds), *Consumer and Industrial Buying Behavior*, North-Holland, New York, NY, pp. 267-86.
- Prendergast, G. P., & Marr, N. E. (1997). Perceptions of generic products: A macro and micro view. *Journal of Product & Brand Management Jnl of Product & Brand Mgt*, 6(2), 93-108.
- Quintal, C., & Mendes, P. (2012). Underuse of generic medicines in Portugal: An empirical study on the perceptions and attitudes of patients and pharmacists. *Health Policy*, 104(1), 61-68.
- Rama Yelkur, (2000). Consumer perceptions of generic products: a Mexican study. *Journal of Product & Brand Management*, 9(7), 446 - 456

- Roux, D. (2007). Consumer Resistance: Proposal for an Integrative Framework. *Recherche Et Applications En Marketing (English Edition)*, 22(4), 59-79.
- U.S. Food and Drug Administration. (n.d.). Retrieved February 25, 2016, from <http://www.fda.gov/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/UnderstandingGenericDrugs/ucm144456.htm>
- Ugur, Y. (1987). Consumer Perceptions of Generic Grocery Products: Users vs. Non-users. *Marketing Intelligence & Planning*, 5(1), 24-27. Retrieved from <http://www.emeraldinsight.com/doi/pdfplus/10.1108/eb045743>
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 53(3), 2-22.





Appendix A: Questionnaire

1. Do you live in Bangkok or nearby?
Yes/No -If the answer is no, Terminate questionnaire.
2. Do you know generic drug?
Yes/No
3. In your understanding, what are the definition of a generic drug? (Multiple checks)
 - Drug that has the same ingredient and use in the same indication
 - Drug that can be uses substituted in the same indication
 - Drug that produced in country
 - Cheaper drug that can be used for the same indication
 - Fake drug
 - Household drug or non-prescription drug
 - Copy drug
 - Copy drug (in The Thai language)
 - Other, please specific
4. How often do you visit drugstore or purchase drug for yourself and your family?
(check only one)
 - More than two times per week
 - 1-2 times per week
 - 1-2 times per month
 - 1-2 times per 3 months
 - 1-2 times per 6 months or more
5. Which drug category that you most purchase from the drug store? (multiple checks)
 - Cardiovascular
 - Painkiller
 - Antibiotic
 - Neurological
 - Drug for digestive system
 - Drug for respiratory system

- Dermatology drug
 - Contraceptive
 - Other, please specific
6. Which way that you get information about the generic drug? (multiple checks)
- Pharmacist
 - Doctor
 - Magazine /newspaper
 - Family/friend
 - Internet
 - Other, please specific.
7. Did you have experienced in generic drug
Yes/no
8. What the key factor you accept generic drug? (Choose only one)
- Doctor recommend
 - Pharmacist recommend
 - Lower expense
 - Original brand does not available
 - Family/friend recommend
 - Feel familiar with generic drug
 - Don't accept generic drug
 - Trust in generic manufacture
 - Other, please specific
9. Perception of quality compares to original drug (Choose only one)
- Superior
 - Same
 - Lower
 - I do not know
10. Perception on price compares to original drug (Choose only one)
- More expensive
 - Same as original drug
 - Cheaper
 - I do not know

11. Perception on value compares to original drug (Choose only one)

- More value
- Same value
- Less value
- I do not know

12. Perception of risk compares to original drug (Choose only one)

- Lower risk
- Same risk
- Risker
- I do not know

13. Geographic data

A. Gender

- Male/ Female/other

B. Age

- Below 17 yr.
- 17-22 yr.
- 22-30 yr.
- 31-40 yr.
- 41-50 yr.
- 51-60 yr.
- above sixty yr.

C. Education level

- Primary school
- Secondary school
- College
- Bachelor degree
- Master degree or higher

D. Income

- No Income
- Below 10,000 THB
- 10,001-20,000 THB
- 20,001-30,000 THB
- 30,001-40,000 THB
- 40,001-50,000 THB
- Above 50,000 THB

E. Occupation

- Government employee
- Private employee
- Own business
- Student
- Housewife
- Retire

F. Marital status

- Single
- Married
- Devote

G. Children

- Have
- Not Have

H. Healthcare Professional

- Yes
- No

