

JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH

How to cite this article:

HASSALI MA, SHAFIE AA, AL-HADDAD M, BALAMURUGAN T, AHMED A, SIOW Y L. A QUALITATIVE STUDY EXPLORING THE IMPACT OF THE PHARMACEUTICAL PRICE WAR AMONG COMMUNITY PHARMACIES IN THE STATE OF PENANG, MALAYSIA. *Journal of Clinical and Diagnostic Research* [serial online] 2010 October [cited: 2010 October 15]; 4:3161-3169.

Available from

http://www.jcdr.in/article_fulltext.asp?issn=0973-709x&year=2010&volume=&issue=&page=&issn=0973-709x&id=948

ORIGINAL ARTICLE

A Qualitative Study Exploring the Impact Of The Pharmaceutical Price War Among Community Pharmacies In The State Of Penang, Malaysia

HASSALI MA*, SHAFIE AA**, AL-HADDAD M***, BALAMURUGAN T****, AWAISU A*****
L*****

ABSTRACT

BACKGROUND: Competition among community pharmacists in developing countries can be very intense due to the unregulated pricing mechanism for pharmaceuticals. Within this context, it is relatively unknown as to what extent the current pricing strategies for pharmaceuticals can improve the professional practice of community pharmacy in these countries.

OBJECTIVE: To determine the factors contributing to the occurrence of the price war and to explore its potential impact on the current pharmacy practice in community pharmacies.

DESIGN: Qualitative research by using individual interviews.

PARTICIPANTS: Ten community pharmacists throughout the state of Penang who were recruited by using the 'snowball sampling' technique participated in this study.

DATA ANALYSIS: All the interviews were transcribed in verbatim and were thematically analyzed.

RESULTS: Four main themes emerged when the factors associated with the price war phenomenon among community pharmacies in the State of Penang were analyzed. These were (1) The distribution of the community pharmacy premises; (2) The role of pharmaceutical companies; (3) The lack of the development of price control mechanisms by the government and (4) The role of the community pharmacists. The participants also highlighted the negative impact which was imposed by the pharmaceutical price war. These included the shrinkage of the profit margins, the lower survival rate of the pharmacy in the current market and the negligence of pharmacy professionalism. Finally, several suggestions were put forward to resolve this phenomenon, including the role of government agencies in developing policies to control the price war by limiting the number of pharmacies in an area, as well as enforcing the recommended retail price policy.

CONCLUSION: The pharmaceutical price war was commonly reported and due to its' impact on the survival of the community pharmacies and also the professionalism of the pharmacists, prompt action needs to be taken to address this phenomenon.

Key words: bonus scheme; pharmaceutical products; community pharmacies: price regulation; price war

Key Messages:

- The factors associated with the price war were (1) The distribution of the community pharmacy premises; (2) The role of pharmaceutical companies; (3) The lack of the

development of price control mechanisms by the government and (4) The role of the community pharmacists.

- The impact of the price war on the pharmacy profession included the shrinkage of the profit margins, the lower survival rate of the pharmacy in the current market and the negligence of pharmacy professionalism.
- The government has a major role to play in developing policies to control the price war

* PhD, Discipline of Social and Administrative Pharmacy, Universiti Sains Malaysia, Malaysia;
** PhD, Discipline of Social and Administrative Pharmacy, Universiti Sains Malaysia, Malaysia;
***PhD, Discipline of Social and Administrative Pharmacy, Universiti Sains Malaysia, Malaysia;
**** PhD, Discipline of Clinical Pharmacy, Universiti Sains Malaysia, Malaysia; ***** PhD, Discipline of Clinical Pharmacy, Universiti Sains Malaysia, Malaysia; *****MPharm,

Discipline of Social and Administrative Pharmacy, Universiti Sains Malaysia, Malaysia
Corresponding Author
Dr Mohamed Azmi Hassali, PhD
Associate Professor,
Discipline of Social and Administrative Pharmacy
School of Pharmaceutical Sciences
Universiti Sains Malaysia
Email: azmihassali@usm.my
Tel: +06046534085
Fax: +06046570017

Introduction

Pharmacists play a vital role in the delivery of healthcare by ensuring safe, effective and the rational use of medicines. However, there remain wide variations in the practice of pharmacy, not only between countries but also within the countries [1]. The increasing numbers of pharmacies in Malaysia may have been the catalysts for the growth of unhealthy business competition among the pharmacy owners.

In Malaysia, especially in Penang, a majority of the community pharmacies are concentrated in urban areas due to the lack of regulation in controlling the opening of new pharmacies [2]. As a result, unhealthy business competition among these pharmacies through price undercutting of the pharmaceutical products has been reported. This phenomenon which is also known as the 'price war', has a negative impact on the pharmacy profession in this country. 'Price war' is defined as the downward price pressure leading to other competitors following the initial move [3]. The price war will lead to prices that are not sustainable in the long run, which is unlike the typical intense price competition.

As there was no conclusive study that had been undertaken to explore in-depth the price war issue in Malaysia, a qualitative study was undertaken among the practicing community pharmacists in the State of Penang. The objective of this study was to probe into the structure and the circumstances of the present market in Penang which underlie the price

war, and to thus explore and assess the potential effects and the impact of the pharmaceutical price wars among the community pharmacies in the State of Penang. The data which was generated will be useful for the development of new policies in combating the price war.

Materials And Methods

Study design

Since only little research has been carried out in Malaysia to identify the extent of the 'price war' on the current community pharmacy practice context, qualitative methods were used to gain a better understanding of the issue (4). The qualitative approach was adopted because it allows a flexible exploration of the respondents' attitudes and experiences.

Recruitment

In total, 10 community pharmacists from multiple locations across the State of Penang were recruited for this study. The areas which were included were Georgetown, Relau, Permatang Damar Laut, Queensbay Mall and Sungai Dua. The 'Snow ball' sampling technique was utilised in order to recruit the study participants. The community pharmacists at the Sungai Dua area were first approached for the interview. Thereafter, they introduced the interviewers to other community pharmacists (the interviewers were then introduced to other community pharmacists to increase the number of

participants). Prior to the interview, the objectives and the procedure of the interview were clarified. Moreover, assurance was given to the participants on the ethical principles of the enquiry, thus ensuring them that the confidentiality of the interview would be maintained.

Interview guide development

The interviews were conducted with a convenience sample of the community pharmacists by using a semi-structured interview guide until saturation was reached, whereby no new themes emerged [4]. The interview guide was developed after an extensive literature review on the current issue. The key questions related to the outline of the interview are listed in [Table/Fig 1]. From this outline, the participants were probed on their experiences related to (1) the present situation of the pharmaceutical price war in Penang, to identify the underlying factors, (2) the impact of the price war on their current practice, (3) the suggestions and the recommendations for overcoming the price war issues.

[Table/Fig 1]: Key questions related to the outline of the interview

Interview Outline	Key questions
Present situation of pharmaceutical price war	<ul style="list-style-type: none"> Do you have any idea about the pharmaceutical price war happening in our country? (How, when and why) In your opinion, pharmaceutical price war in Malaysia is caused by multinational industry or local industry? Please elaborate Do you have any ideas about the role of community pharmacy towards the pharmaceutical price war issue? Who else do you think should be responsible to this problem? Which party do you think benefits the most from this issue?
Impacts of price war on current community pharmacy practice	<ul style="list-style-type: none"> Can you describe the impacts of price war on you/community pharmacies in Penang? Can you please tell us the profit margin of the pharmaceutical product in this shop before and after price war? (if possible) Do you think that price wars are healthy for pharmaceutical market in Penang? Can you explain some actions/strategies that have been taken to overcome the pharmaceutical price war issue? Please elaborate the effectiveness of the action Do you have any ideas how to prevent pharmaceutical price war in our country?
Suggestions and recommendations for overcoming the price war	<ul style="list-style-type: none"> Do you have any suggestions towards establishing a policy to regulate the price of pharmaceutical products in Malaysia? (If there is any existing policy, who is responsible to run the policy?) Do you know about the action/policy taken by foreign country in regulating the price of pharmaceutical products? In your opinion, will price regulation help to alleviate the intensity of the price wars? How do you think about the bonus scheme in pharmaceutical market? What are the impacts of the bonus scheme on the potential (survival/development/growth) of a pharmacy?

Interview sessions

The interviews took place at the pharmacies where the participants worked. Each interview was conducted by using a clear, systematic process of planning, data collection, analysis and interpretation and by minimizing the known sources of error and bias. With the aim of reducing the inopportune differences between the sessions and to get full

contributions, the same interviewer conducted all the interviews. Open ended questions were used during the interview to allow the participants to express their opinion. Each interview session took an average of 20 to 30 minutes. The interviews were voice recorded and were supplemented with field notes, wherever possible.

Data Analysis

All the recordings were transcribed in verbatim and the transcripts and field notes were thematically analyzed [5]. The contents of the transcript were subdivided into a few issues which were related to the factors which led to the price war, the impact of the price war and the recommendations and suggestions from our participants to overcome the price war issue. The themes were refined, as associations were made in an attempt to provide explanations for the findings. Over-arching themes emerged as the analysis progressed. The differences in coding for sections of the text were resolved and were reviewed through a consensus and discussion among the authors. The data collection was concluded when no new themes were identified and therefore, it was concluded that the saturation point had been reached.

Results

A total of 10 community pharmacists with an average age of 36 years of age were interviewed. All the participants were Chinese, with an average working experience of eight years. The demographic characteristics of the participants are summarized in [Table/Fig 2].

[Table/Fig 2]: Demographic data of the participants

Demographic characteristics		Frequency
Gender	Female	7
	Male	3
Age	20 – 29 years old	1
	30 – 39 years old	7
	40 – 49 years old	1
	50 – 59 years old	1
Working experience as a community pharmacist	1 – 5 years	3
	6 – 10 years	5
	More than 10 years	2

The factors resulting in the pharmaceutical price war

Four themes emerged during the thematic analysis of the factors, resulting in the pharmaceutical price war. These factors were (1) The distribution of the community pharmacy premises; (2) The role of pharmaceutical companies; (3) The lack of the development of price control mechanisms by the government and (4) The role of the community pharmacists.

A) Distribution of the community pharmacy premises

The failure of the government to control the distribution of community pharmacies in one area has led to a high concentration of community pharmacies, thus creating high competition among the pharmacies.

The following were the comments given by the participants, which were quoted from the excerpts of the interview:

“I think it’s about 13 years ago when I started business in this area. We were the first pharmacy here. At that time, there was very little price war. After 10 years, there are about 10 pharmacies in this area.”

“Another reason (that causes the price war) is that the pharmacists open their pharmacies too near to each other, even next door, so that the customer can go and compare the prices.”

B) The role of pharmaceutical companies

All the participants felt that the different bonus scheme offered by the pharmaceutical

companies contributed to the price war. These companies offered different bonus schemes to people from different professions. As quoted from the participants:

“If we are to prevent the pharmaceutical price war in our country, the pharmaceutical companies should supply the pharmaceutical products at the same price for both doctors and pharmacists. No bias. What is happening today, is that doctors are getting better offers in terms of price and yet, the pharmacists still have to compete with each other for customers; therefore, they have to reduce the price to attract more customers. ”

“Bonus scheme? I think some of the companies are crazy. Some companies even offered more bonus than what we purchased. This is force selling.”

Besides, the participants thought that the absence of the Recommended Retail Price (RRP) of a product has led to unregulated pricing strategies by different community pharmacies, eventually resulting in the price war.

“Normally, the local industry would be the main contributor of the price war, as there are no recommended (retail) prices given by the companies. Pharmacists can sell at any price that they want to.”

C) The lack of the development of price control mechanisms by the government

Some participants claimed that the lack of the development of pricing regulations by the government had caused the price war. One of the participants expressed that:

“In Australia and USA, the price of pharmaceutical products, especially poison (controlled drugs); is strictly regulated by the authorities. Any price changes need to go through proper procedures. In Thailand, there is no control of patency and the tax on pharmaceutical products. So, the products are very cheap and the price war occurred (in Thailand too) as in Malaysia.”

D) The role of the community pharmacists

The participants expressed that community pharmacists should also be responsible for the price war. They lowered the prices lower than the market price to attract more customers in order to increase their market share, which started off the price war.

“Some of the pharmacies were also the culprits, because they started to sell at very low prices and started competing with other pharmacies.”

“No. It’s all from the pharmacists. We, the pharmacists caused this problem (price war). You see, it’s because (of) the fresh graduates. When they first started (the) business, they were scared of not getting business and (therefore to) try (cut price) to attract more customers.”

The impact of the pharmaceutical price war

The participants highlighted that the impact of the price war was great enough to determine the survival of the pharmacy in the market. The price war has created an unhealthy market environment among them.

“The price war happens anywhere, the issue has become more serious than expected and beyond control. The survival of the community pharmacy in Penang is getting tough”

In more severe cases, the price war was thought to be crucial in determining the “lifespan” of a pharmacy. One of the participants gave the following opinion:

“Gaining profit is no longer an issue for a pharmacy, but how to survive in the market is more important. (There are) More and more new pharmacies now open in Penang.”

Moreover, the price war on pharmaceutical products has shrunk the profit margin and has caused great reduction in the income.

“At that time (13 years ago), we could mark up to around 30%, sometimes up to 40% and now it has dropped to 10-15%.”

“Like I’ve told you just now, about 13 years ago, we could mark up (the price) of a

branded medicine by 30-40%, but now we can only gain a 2-5% profit.”

The professionalism of a pharmacy was claimed to be neglected, because the pharmacy had become like a grocery- store, rather than a professional healthcare provider. Customers would bargain over the price of pharmaceutical products rather than seek professional advice from the pharmacists. The participants provided the following assertion.

“The price war makes our pharmacy like a supermarket and people just negotiate the price, there is no professional value anymore.”

“It is not reasonable for the price war to happen among the pharmacies, as pharmacy is a professional occupation”

“Certain price wars can lower our profit and also, it can affect the pharmacist’s reputation, because the patient tends to pay more attention towards the price and not to the counselling. The lower price is the priority and not the therapeutic benefit.”

Recommendations and suggestions to overcome the pharmaceutical price war

The participants provided several recommendations and suggestions that they thought might be useful in alleviating the pharmaceutical price war. The recommendations were generally targeted to the government and the community pharmacists.

Most of the pharmacists expressed that government agencies should play a crucial role in regulating the price of pharmaceutical products. The participants also suggested the setting of pharmaceutical prices according to the market price, in order to reduce the chance to elicit the price war. The following were some quotations from the excerpts of the interview.

“The government should come out with policies that would help to regulate the pharmaceutical product prices, just as in US, Australia and New Zealand.”

“The government has to step in and control (the pharmaceutical price war by setting up regulatory bodies to control (the pharmaceutical product price).The pharmaceutical companies, doctors and the professional pharmacy bodies have to work together too.”

“In order to survive in the market, you have to follow the price of the current market trend to hold your customers.”

Besides that, another problem which had to be resolved, was the separation the dispensing rights between the physicians and the pharmacists. One participant voiced out his perceptions regarding the issues of the dispensing rights with the following comments:

“Of course, dispensing rights should be separated and clarified. With this, there will be no bonus scheme problem, because nowadays, doctors are getting a better bonus from the pharmaceutical companies.”

Apart from that, the participants thought that the government should control the number and the distribution of the pharmacies within an area to avoid the oversaturation of the pharmacies.

“Lack of location mapping causes price war. Within 5kms, there should be only 1 pharmacy.”

Some participants opined that community pharmacists themselves should play an important role to reduce the occurrence of the pharmaceutical price war. Most of the participants have reported that the best way to retain their regular customers and to attract new customers, apart from substantially reducing the price of a product, was to provide better service to their customers. This may involve the attitude, gestures, discounts and screening services which are provided in the community pharmacy.

“For now, I see (that) we can’t do anything on the price of the product. So, we try to give good service to compensate the price and it is terrible if the price is always reduced.”

“I try to improve my service as good as I can and I’m also providing delivery to selected customers for free. That can increase their loyalty”

One of the participants had a different opinion regarding controlling the current price war. He stated that *“at present, there should not be any measurement which should be taken to intervene or overwrite the current mechanism of the price war”*. He illustrated that the current phenomenon was an auto-regulated mechanism. The price of the pharmaceutical products would be self-regulated by the market itself, until a certain point where the price reached a plateau, at which the price was satisfactory and acceptable for both the customers and the pharmacies and yet, the profit margin was sufficient to maintain the operation of the pharmacies. Therefore, he suggested that the pharmacies should just follow the market price, but not reduce the price simply; as at least, this would promise a higher rate of survival for the pharmacy in the market.

Discussions

The increasing phenomenon of the price war among the community pharmacies in the state of Penang has occurred ever since the community pharmacies started blooming in Penang. The intensity of the price war is on the rise due to the severe competition among the community pharmacists.

The price war occurs almost always in concentrated market settings [6]. According to the report from the Pharmaceutical Services Division, the Ministry of Health, Malaysia, in 2008, there were a total of 263 pharmacies in Penang [7]. However, these pharmacies were not well distributed. Most of the community pharmacies were concentrated in town areas due to the lack of regulations in controlling the opening of new pharmacies [2]. In order to survive in a confined market place, the pharmacists tended to reduce their prices and this subsequently led to strong retaliation [8]. A series of retaliations consequently elicited the price war.

There were frequent reported cases of unfair bonus schemes which were offered by the multinational companies to different healthcare professions. The physicians were normally offered better bonuses than the community pharmacists, because they were seen as major decision makers in the prescribing and the dispensing of medications, as there was no dispensing separation in Malaysia as yet. In fact, the bonuses offered

among the community pharmacies varied depending on the quantity of the procurement and the purchasing power of the pharmacies. With more bonus and hence, lower cost prices, a community pharmacist could sell his/her pharmaceutical products at a lower price as compared to other competitors. Secondly, the lack of RRP by the pharmaceutical companies had allowed the community pharmacies to set prices on their own, based on their procurement price, thus, leading to an uncontrolled price cut in order to attract more customers.

The lack of strict pricing regulations on the pharmaceutical products enforced by the Malaysian government could lead the community pharmacists to manipulate the drug price which eventually could contribute to the price war. Perhaps, extensive implementation of this obligation with slight modification could help to avoid the occurrence of the price war. In India, both the wholesale and the retail margins are determined by the Organisation of Pharmaceutical Producers of India (OPPI) and the All India Organisation of Chemists and Druggists (AIOCD). The OPPI and AIOCD determined the margins for both the wholesale and the retail prices. A 20% margin of MRP was included in the final consumer price, whereas the margin was 16% for the price controlled products. The Drug prices were regulated by the National Pharmaceutical Pricing Authority (NPPA). Between 2003 and 2005, five surveys found that the median prices were less than the International reference price (IRP).

The role of the community pharmacists themselves, as the contributing factors for the happening of the price war, should not be neglected. The price war was ignited after newcomers entered the market, especially when they purposely lowered their prices to gain their market share. Product prices had been exploited as the likely instrument of choice by the newcomers to gain public trust and also to establish their marketplace, as it could be changed fast, easily leading to immediate and measurable results [9]. The challenger charges lower prices, leading other competitors to over-compete [10]. This eventually results in a cascade of price reduction and eventually price war. The situation was made worse if the pharmacies

were not owned by the pharmacists. From the business perspectives, the owners opened the pharmacies with the intention of getting more profits and customers. Therefore, most of the time, they are the decision makers who determine the prices, whereas the pharmacists' role is limited to providing advice and counselling.

In general, the price war imposes negative impacts on community pharmacies and promotes an unhealthy competition between them. 'Price' is always one of the major considerations for customers. In a concentrated market, customers may develop unrealistically low reference prices as they visit more pharmacies and may come to consider price as their key purchasing criterion [11]. As a result, some pharmacies were forced to offer substantial discounts in order to gain their choice share. This has eroded the profit margin of the pharmaceutical products greatly, to the extent of selling some pharmaceutical products at the cost price as a means to encourage customers to visit the pharmacy and to spend on other products, as testified by some of the participants in this study. This scenario is unhealthy, because cutting prices in order to gain market share can often permanently hurt the profits and the revenues [12], [13].

Moreover, the price war is considerably associated with the survival of a pharmacy in the market. In order to ensure the survival of a pharmacy, the pharmacists have come to accept the narrowest profit margin that goes with it. Those who failed to compete in the price war frequently were forced to close down their services and businesses.

In the long term of running the business, the price war is absolutely unhealthy and it leads to the transformation of the pharmacy profession into a business oriented profession, where prices and profits are the main issues in the daily operations of the pharmacy business [13]. The price war blinded the pharmacists as well as the customers on the role of the pharmacists and their professionalism services. The overall picture of the pharmacists as a professional body has been distorted because the pharmacy has become like a grocery-store rather than a professional healthcare provider,

where nowadays customers can bargain over the price of the pharmaceutical products.

Most of the participants asserted that this phenomenon will not come to a halt by itself and may be beyond control, if timely measures are not taken to overwrite the current mechanism of the price war. The Malaysian government should play its role in curbing the price war. Deregulation of the drug price allowed the community pharmacists to compete their drug price instead of the quality of the services [14]. Thus, government agencies should have a certain extent of regulations over the pharmaceutical product prices which are set by the drug manufacturers, wholesalers, distributors, importers and even the community pharmacies themselves. The responsible agencies should come out with a price regulatory mechanism in order to prevent certain irresponsible parties from manipulating the prices of the pharmaceutical products. For example, in Australia, the Pharmaceutical Benefits Scheme (PBS) ensures that all Australians have affordable and reliable access to a wide range of necessary medicines [15]. When purchasing a medication under the PBS, the maximum price that a customer pays is the patient's co-payment contribution, which is compulsory and cannot be discounted by the pharmacies under any circumstances. This has helped to prevent the manipulation on the drug price. The scheme will not only alleviate the intensity of the price war, but it will help to shift the pharmacies' foci to non-price instruments by offering pharmaceutical care and services of better quality to attract the customers. Providing quality pharmaceutical care should be the selling point of a pharmacy.

Secondly, a mechanism for the standardization of the bonus schemes which are offered to both the physicians and the pharmacists should be established. Bias should be omitted so that the physicians and the pharmacists are offered the same bonus scheme, so that the price of a product is no longer the determining factor when purchasing a pharmaceutical product. Moreover, this can also change the mindset of the community pharmacists in competing with prices to provide better quality of services to their customers.

Furthermore, the government should regulate the pharmacy licensing to avoid the oversaturation of community pharmacies in one area. A more uniform distribution of the pharmacies will help to promote rural development and also to increase the availability of pharmacy services to everyone. This will help to restore the balance of the number of the pharmacies between urban and rural areas.

The issue of dispensing rights in Malaysia should also be addressed by the government as an effort in dealing with the pharmaceutical price war. When the dispensing right is handed over to the pharmacists, their market share will increase, which will result in less competition among the community pharmacists and a higher level and quality of the services. For example, in the UK, the community pharmacists were paid a fixed amount of professional fees for each items which were dispensed [16]. This ensures that the community pharmacists are able to focus more on providing better health care services in order to attract customers, rather than be actively engaged in price war to secure their survival.

Limitation

The main limitation of this study is that it was conducted only with pharmacy practitioners in the State of Penang and the findings therefore may not be confidently extrapolated to pharmacists practicing in other states. However, the pharmacy practice system across the states is similar it is likely that pharmacists from other parts of the nation would have similar perceptions towards this issue.

Conclusions

The pharmaceutical price war in Penang has made an adverse impact on the community pharmacists, by substantially reducing their profits and threatening their survival. Moreover, the price war also tarnished pharmacy professionalism and halted the opportunity of the pharmacist to focus on providing quality pharmaceutical care and services. Government agencies can play a major role in the regulation of the drug prices by monitoring the distribution of the pharmacies in certain areas and also, by monitoring the bonus schemes which are

offered by the pharmaceutical companies. Furthermore, community pharmacists should be encouraged to compete with each other in providing excellent pharmaceutical services instead of the price of a product.

Conflict Of Interest

The authors declare that there is no conflict of interest.

Acknowledgements

Special acknowledgements and gratitude are given to those who contributed their efforts in conducting the interviews: Chong MK, Ho RY, Lau ZN, Mohamad M, Mat MHD, Hamidon MH, Md ZNS, Toh SP, Yeoh CY, Yew KP. Secondly, we would like to express our gratitude to the community pharmacists who volunteered to participate in this study. Without their help, our research wouldn't have been able to be done on time.

References

[1] Anderson S. The state of the world's pharmacy: a portrait of the pharmacy profession. *J Interprof Care*. 2002;16:391-404.
 [2] Wong SS. Pharmacy practice in Malaysia. *Malaysian Journal of Pharmacy*. 2001;1:2-8.
 [3] Urbany JE, Dickson PR. Competitive price-cutting momentum and price reactions. *Market Letters*. 1991;2:393-402.
 [4] Berg BL. *Qualitative research methods for the social sciences*. 5th Ed ed. Boston: Allyn & Bacon; 1998;14-16.
 [5] Pope C, Ziebland S, Mays N. Qualitative research in health care: Analysing qualitative data. *Br Med J*. 2000;320:114-6.
 [6] Green EJ, Porter RH. Noncooperative collusion under imperfect price information. *Econometrica*. 1984;52:87-100.

[7] Pharmaceutical Services Division. Annual Report 2008. Petaling Jaya: Ministry of Health, Malaysia; 2008 Contract No.: Document Number|.
 [8] Slade ME. Strategic pricing models and interpretation of price-war data. *Eur Econ Rev*. 1990;34:524-37.
 [9] Kalra A, Rajiv S, Srinivasan K. Response to competitive entry: A rationale for delayed defensive reaction. *Marketing Science*. 1998;17:380-405.
 [10] Griffith DE, Rust RT. The price of competitiveness in competitive pricing. *Journal of the Academy of Marketing Science*. 1997;25:109-16.
 [11] Heil OP, Helsen K. Toward an understanding of price wars: Their nature and how they erupt. *Intern J of Research in Marketing*. 2001;18:83-98.
 [12] Henderson DR. What are price wars good for? Absolutely nothing. Many companies think they can compete on price even though they don't have a true cost advantage. The results is, at best, a pyrrhic victory. *Fortune 500*. 1997;214-220.
 [13] Van Heerde H, Gijsbrechts E, Pauwels K. Price war: What is it good for? Store incidence and basket size response to the price war in Dutch grocery retailing. *INFORMS Marketing Science Conference*; 2005 16-18 June; Atlanta, Georgia, USA. 2005;512-520.
 [14] Lexchin J. Effect of generic drug competition on the price of prescription drugs in Ontario. *CMAJ* 1993;148:35-8.
 [15] Sansom L. The subsidy of pharmaceuticals in Australia: processes and challenges. *Aust Health Rev*. 2004;28.
 [16] Kanavos P. Financing pharmaceuticals in transition economies. *Croat Med J*. 1999;40:244-59.