

## Original Research Article

# Pharmacists' Perception of the Sale of Non-Clinically Proven Health Supplements in Penang, Malaysia

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## Abstract

**Purpose:** To explore community pharmacists' perception of the sale of non-clinically proven health supplements and over-the-counter (OTC) products available in Penang, Malaysia.

**Methods:** A cross-sectional survey using a self-completed postal questionnaire was conducted in July 2010 among 200 community pharmacists practicing in Penang Island.

**Results:** Fifty six pharmacists participated in the study (response rate, 28.0 %). A total of 10.7 % respondents indicated that the sale of non-clinically proven products result in high profit. Only 25.0 % of the pharmacists believed that non-clinically proven OTC products are effective, while 35.7 % thought that it is not ethical to sell these products. A majority of the respondents (94.7 %) agreed that manufacturers' advertisement have a huge effect on positive consumers' behaviour towards such products. Most respondents agreed that manufacturers of these products claim that their products are effective (57.1 %) and have few or no side effects (60.7 %).

**Conclusions:** Pharmacists who participated in the study have mixed opinions on the efficacy and effectiveness of non-clinically proven products. There is a need for pharmacists to be well educated on the evidence-based use of these products in order to be able to offer appropriate advice to those who come to them to purchase the items.

**Keywords:** Perception, Health promotion, Urban poor, Health supplements.

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## INTRODUCTION

Health supplements have received widespread acceptance amongst the general public in many parts of the world in recent years [1,2]. For a majority of the general public, health supplements are purchased mostly for self-medication purposes [3]. In Malaysia, health supplements are largely sold as over-the-counter

(OTC) products and can be readily obtained from community pharmacies, hyper-markets, health food stores, general provision shops, complementary and alternative medicine practitioners and also from direct selling companies. These supplements are generally sold as herbal or traditional remedies, tonics, vitamins, minerals or food supplements and many would have claims of being natural.

However, the clinical use and efficacy of these products are not supported with well randomised clinical trials and does not comprise an adequate assessment of safety [3,4]. Furthermore, most of these product manufacturers employ testimonials of users as part of their advertising strategy.

Although it is hard to provide accurate data on the use of non-clinically proven therapies in Malaysia, a recent local study published concluded that about 88.9% of the population (N= 6947) are using biological-based therapies, which included herbal therapy, vitamins and supplements for health problems [5]. Accordingly, the World Health Organization (WHO) had reported that the sales of traditional and complementary/alternative medicines in Malaysia are estimated to be RM 1 billion (US\$ 333 million) annually [6].

The increasing demand for such products necessitates the community pharmacists to be well equipped with adequate and up to date information about these products. Besides, being an expert in medicinal products, they are also expected to be able to provide advice on the benefits and risk of using such preparations to consumers. Currently, there are no studies in Malaysia which focused on the community pharmacist's beliefs towards the sale of non-clinically products. Thus, the main aim of this study was to explore the community pharmacists' perception towards the sale of the non-clinically proven health supplements and over-the-counter (OTC) products which are available in the local setting.

## METHODS

A cross-sectional survey using a self-completed postal questionnaire was conducted in the month of July 2010 among community pharmacists practicing in the state of Penang, Malaysia (N = 200). The questionnaire was tested for its face and content validity by two experts. Subsequently, a pre-test was performed by assigning 15 community pharmacists to answer the questionnaire. Reliability analysis of the responses yielded a Cronbach's Alpha value of 0.644 and all of the items appeared to make a valid contribution to the overall score.

The final questionnaire comprised two sections. The first section assessed the demographic characteristics of the respondents. The second section evaluated the pharmacists' perceptions towards the sale of non-clinically proven health supplements and OTC. Additionally, the reasons for selling those products were also explored. The questions in this section were framed into a

3-point Likert scale (1 = disagree, 2 = neutral, 3 = agree).

The questionnaires were posted along with a prepaid return envelope to the respondents. A follow up reminder letter was sent to the non-respondents after two weeks to increase the response rate. The participation of the pharmacist involved was voluntary. Informed consent was obtained and anonymity was guaranteed. All the collected data were entered into SPSS® Version 15.0 for statistical analysis.

## RESULTS

Upon completion of the survey period, 56 responses were received (response rate of 28.0%). The respondents were mostly female (62.5%) and aged between 30 to 39 years (53.6%). The demographic characteristics of the respondents are shown in Table 1.

**Table 1:** Demographic characteristics of the respondents

Characteristics	Frequency (%)
<b>Gender</b>	
Male	21 (37.5)
Female	35 (62.5)
<b>Age (years)</b>	
20 – 29	5 (8.9)
30 – 39	30 (53.6)
40 – 49	19 (33.9)
> 40	2 (3.6)
<b>Ethnicity</b>	
Malay	12 (21.4)
Chinese	43 (76.8)
Indian	1 (1.8)
<b>Status in Pharmacy</b>	
Manager/Owner	44 (78.6)
Manager/Non-owner	3 (5.4)
Employee	9 (16.1)
<b>Duration of practice (years)</b>	
1 – 3	1 (1.8)
4 – 6	9 (16.1)
7 – 9	14 (25.0)
>10	32 (57.1)

In this survey, only 10.7 % of the respondents indicated that the sale of non-clinically proven OTC products generated high profit (Table 2). Interestingly, only 25.0 % of the pharmacists believed that non-clinically proven OTC products are effective, while 35.7 % thought that it is not ethical to sell these products. Nevertheless, a large proportion of the respondents sell these products in order to sustain their pharmacy business (57.4 %) or to compete with other pharmacies (50.0 %). About half (51.7 %) of the surveyed pharmacists perceived that there is high demand from the consumers regarding the non-clinically proven products. A majority of the

respondents (94.7 %) agreed that manufacturers' advertisements influenced consumers' choice of such products. The respondents mostly agreed that the manufacturers of these products claim that their products are effective (57.1 %) and have fewer or no side effects (60.7 %).

**Table 2:** Pharmacists' perceptions of the sale of non-clinically proven health supplements and over-the-counter (OTC) products

Statement	Responses**			Fisher exact test p-values				
	DA n (%)	N (n) (%)	A (n) (%)	Gender	Age	Ethnicity	Type of practice	Duration of practice
The sale of non-clinical proven health supplement and (OTC) products will bring a lot of profit.	29 (51.8)	21 (37.5)	6 (10.7)	0.071	0.396	0.542	0.067	0.323
I believe that non-clinically proven OTC products in this country are effective	13 (23.2)	29 (51.8)	14 (25.0)	0.523	0.177	0.252	0.917	0.116
In order to sustain my pharmacy business, I need to sell various non-clinically proven OTC products.	17 (30.3)	7 (12.5)	32 (57.4)	0.217	0.739	0.166	0.498	0.118
There is high demand from my customers towards the non-clinically proven OTC products.	12 (21.5)	15 (26.8)	29 (51.8)	0.937	0.577	0.955	0.414	0.599
Massive advertising by companies manufacturing the non-clinically proven OTC products have a very strong influence among my customers.	0 (0.0)	3 (5.4)	53 (94.7)	0.284	1.000	1.000	0.522	1.000
Personally, I think it is not ethical to sell all the non-clinically proven products in a pharmacy.	16 (28.6)	20 (35.7)	20 (35.7)	0.293	0.164	0.296	0.854	0.744
I need to sell the non-clinically proven OTC products in my pharmacy because I need to compete with the other pharmacies.	12 (21.4)	16 (28.6)	28 (50)	0.139	0.428	0.065	0.192	0.059
The manufacturers of the non-clinically proven products claim that their products able to treat chronic disease and has other benefits.	12 (21.5)	12 (21.4)	32 (57.1)	0.421	0.025*	0.747	0.830	0.094
Most of my customers prefer the non-clinically proven products than other products or pharmaceuticals in my pharmacy.	27 (48.2)	23 (41.1)	6 (10.7)	1.000	0.004*	0.369	0.197	<0.001
The manufacturers of the non-clinically proven products claim that their products have fewer or no side effects.	7 (12.5)	15 (26.8)	34 (60.7)	0.855	0.042*	0.495	0.576	0.553

\*\*DA = Disagree, N = Neutral, A = Agree); \*p < 0.05

## DISCUSSION

Non-clinically proven preparations are widely accepted around the globe [7]. Perception of community pharmacists on the use of non-clinically proven preparations cannot be undermined since these preparations are sold over-the-counter in pharmacies in most of the countries. These preparations are considered as "safe and natural" alternatives to conventional medicines and have been reported in earlier studies [8,9]. However results of this study reflect a mixed response regarding the efficacy of these preparations. The proportion of pharmacists who held negative beliefs of the products' efficacy were almost equal to those who supported it. This finding differs from that of Kwan *et al* which reported that about 50 and 42 % of pharmacists believed that these preparations are not safe and most have a high degree of placebo effect respectively [10]. However, a study in California, USA reported that 48 % of pharmacists believed that alternative medications are effective [11].

Out of the total study respondents, 28.6% of them agreed that it is not unethical to sell these preparations in pharmacies. In a study by Fakeye and Adisa [12], majority of their study respondents stated that pharmacists should stock complementary medicines.

About half of the respondents disagreed that sales from non-clinically proven health products bring them high profits. This contradicts the findings of Naidu [13] who reported that an increase in annual sales is predicted due to the availability of complementary medicines at their pharmacies. In a study by Bouldin *et al*, a majority of pharmacists agreed that the sales of herbal medicines have a high profit potential [14]. Patient's demand for non-clinically proven products was also reported by the study respondents. A proportion of the responding pharmacists indicated that the high demand of OTC health supplements from the customer was the major reason of sales. This finding is consistent with a study conducted by Braun *et al* in which it was mentioned that complementary medicines are widely used by pharmacy customers of all ages and there is a high demand of these products [15].

A key issue highlighted by the present study is the effect of advertisement of OTC products on consumer behaviour. Almost all respondents agreed that massive advertisements have a great influence on consumers. This is buttresses the study by Bell *et al*, who reported that 15 % of people were ready to terminate their relationship with their doctor if they refused their

request for an advertised drug [16]. In another study, Basara found a significant increase in the number of new prescriptions for a product during and after it was advertised directly to consumers [17]. However, there is limited data focusing on the effect of advertisement of non-prescription medicines. In a study conducted in New Zealand, pharmacists reported that consumers request pharmacist-only medicines after watching the advertisements [18]. It can be concluded that advertisement is the major contributing factor to demand for non-clinically proven OTC products at pharmacies.

Another important aspect related to non-clinically proven products is their use in chronic conditions. Approximately three out of five respondents did agree that manufacturers of these products do claim efficacy of their products in chronic illnesses. Further evidence on the use of complementary medicines comes from frequent studies in patients with serious chronic illnesses, including cancer [19] and HIV/AIDS [20]. However, the effect of claims offered by the manufacturers on consumer behaviour is not reported in these studies and there is no data available in the Malaysian context.

In the present study, about half of the surveyed pharmacists disagreed that their consumers prefer non-clinically proven preparations over other products or pharmaceuticals in their pharmacies. Previously reported studies on the preferences of consumers for complementary medicines over conventional medicines portray a different situation. Patients' choice of using non-clinically proven products was attached to lack of effectiveness of other treatment and safety concerns [21]. Patients' reasons for seeking complementary medicines in these studies suggest that conventional medicines have not met their needs. In a number of cases, these products may wholly or partly substitute conventional medicines such as in patients with cancer where it is clearly intended to be complementary to conventional care [21]. In Malaysian context, although the use of complementary medicines is quite common, conventional therapies still dominate the Malaysian society. Therefore, it can be hypothesized that consumers in Malaysia are still satisfied with conventional therapies as their needs are fulfilled and they feel safe in using conventional treatment.

Within the context of the pharmacy profession, it is understood that preparation and dispensing of pharmaceutical products have high attraction for the pharmacists. Dispensing accounts for approximately 70% of the gross income of most

community pharmacies in developed countries [22]. However, in Malaysian health settings, dispensing and prescribing practices are not yet separated. The prescribers are therefore allowed to dispense and stock medications. At the pharmacies, only "Class C Poisons" (products that can only be sold as a dispensed medicine with entry in the prescription book) are dispensed by the pharmacist. As the pharmacists have less opportunity for supplying prescription medicines, they are forced to stock and sell products other than pharmaceuticals. This may include cosmetics and non clinical proven products. This observation is supported by the study results which showed that a third of the respondents agreed that they stock and sell non-clinically proven products for the sustainability of their pharmacies. This is further reflected by the study result where half of the surveyed pharmacists viewed that competition with other pharmacies was the major reason for them to promote such products.

### Limitations of the study

This study has limitations which influenced the generalization of its findings. Whilst efforts were taken to recruit 200 pharmacists, it is possible that the mailing method for conducting the study was responsible for the low response rate and hence the recruited respondents do not fully represent all pharmacy customers. Limited data available from literature regarding the factors associated with pharmacists' of non-clinically proven health supplements makes it difficult to compare the study findings with those of other studies.

### CONCLUSION

The use of non-clinically proven preparations is widespread and established in many cultures and countries. Findings of the present study indicate that pharmacists who participated in the study have mixed opinions on the efficacy and effectiveness of non-clinically proven products. Therefore, community pharmacists should constantly educate themselves in order to be properly equipped to provide appropriate advice and counselling to those who use these products.

### DISCLOSURE

The authors declare no conflict of interest in conducting this research.

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