

## Self-medication: Awareness and Attitude among Malaysian Urban Population

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### Abstract

**Background:** Self-medication is defined as obtaining and consuming drug(s) without the advice of healthcare professionals either for diagnosis, prescription or surveillance of the treatment. The practice of self-medication is becoming more common worldwide and currently plays a major role in self-care.

**Objectives:** The objectives of our study were: (I) To determine the perception and level of awareness regarding OTC medications, among the general public in Malaysia and (II) to determine the effect of factors such as socio-demographics, personal health and family history of illness, on the practice, attitudes and awareness regarding OTC drugs, among the Malaysian population.

**Methods:** In this cross-sectional study, a validated self-administered, questionnaire was used to collect data among University students, working adults and those visiting pharmacies in Malaysia.

**Results:** Of the 364 respondents, 116 (31.6%) were male and 248 (67.6%) were female. Half the population was students while the other half was employed. Overall, 308 (83.9%) participants consumed OTC medications. The commonly consumed OTC drugs were supplements and vitamins followed by painkillers, flu/ cough remedies and sore throat products. The OTC medications were most frequently bought from pharmacies. Easy access, convenience and time saving were the most frequent reasons for self-medication. Eighty two percent of the respondents stated that their level of knowledge regarding OTC medications was moderate to low. Of the study participants, 58 were on regular prescription medications and half of them were unsure or disagreed that OTC drugs could interfere with the regular prescription drugs.

**Conclusion:** Lack of awareness regarding drug interaction is an issue that warrants further intervention by increasing the knowledge of the public, so as to prevent adverse events from the drugs.

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**Key words:** self-medication, over-the-counter, non-prescription, drugs, awareness, attitudes

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## **Introduction**

Self-medication, which is a common self-care practice, is often reported around the world.<sup>1</sup> It is defined as obtaining and consuming drug without the advice of health care professionals either for diagnosis, prescription or surveillance of the treatment.<sup>2</sup> Medicines for self-medication are often called 'non-prescription' or 'over the counter' (OTC) drugs and can be purchased without a doctor's prescription, from pharmacies and some from non-pharmacy retail outlets.

Self-medications or over the counter (OTC) drugs currently play a major role in self-care, offering individuals the choice of making independent decisions regarding their own health. The WHO has also pointed out that responsible self-medication can help prevent and manage conditions that do not require consultation with a physician and provides a cheaper alternative for treating common illnesses. Potential benefits of OTC drug availability to the public include enabling people to take responsibility and build confidence to manage their health, thereby promoting self-empowerment. Furthermore, it allows rapid and convenient access to treatments and save the time spent in waiting to see a doctor.

The use of OTC drugs has been studied in many different populations and the results demonstrate that about 25-75% of the population consume OTC medications.<sup>3-7</sup> A recent Malaysian study reported that 75% of the respondents had used OTC drugs at least once.<sup>8</sup> The most commonly used OTC drugs are analgesics, antipyretics, antibiotics, cough remedies and supplements,<sup>5,6,9</sup> with these medications very frequently being obtained from the pharmacies.<sup>8</sup> As expected, in many studies, time saving has been quoted as one of the significant benefits to self-medication, as these drugs are conveniently available in many pharmacies, supermarkets and retail stores and, does not require making appointments with doctors to obtain these drugs.<sup>3,10</sup> However, lack of adequate knowledge of the drug dosage and frequency of intake can potentially lead to adverse effects from the drugs. There is also a possibility of not obtaining the appropriate medication for the condition, leading to a delay in the diagnosis and treatment of the condition.<sup>3</sup>

Previous studies report that generally, people are aware of the effects, potential side effects, misuse and abuse of OTC drugs.<sup>10-12</sup> However the level of understanding about drug interactions is poor.<sup>11,13</sup> This may have special relevance where OTC drugs are taken concurrently with other prescribed medication. Most of the time, people purchase OTC drugs based on their knowledge and experience regarding the effectiveness of the medication. Nevertheless, a doctor or a pharmacist is consulted when in doubt or if more information is required.<sup>8,10,11</sup>

The majority of people perceive that doctors should be consulted for major illnesses, while the OTC drugs could be used for the short term and for minor ailments.<sup>8</sup> Patients were generally happy when doctors inquired regarding the use of OTC drugs and made changes to it, if required. However, people were unhappy when pharmacists provided advice regarding the OTC medications, as these people were uncertain of the role played by the pharmacists.<sup>4,14</sup>

Many studies have been conducted in various countries on the extent of OTC drug use. However, such studies are still scarce in Malaysia. Therefore, this study was conducted to evaluate the perception and level of awareness regarding OTC drugs, in the Malaysian population. The objectives of our study were: (i) To determine the perception and level of awareness regarding OTC medications among the general public in Malaysia and (ii) to assess

the correlation between socio-demographic factors & personal / family history of illness AND awareness, attitudes & practice of OTC drugs, among the Malaysian population.

## **Methods**

Participants of the study included consenting males and females of the general public aged 18 years and above with an ability to read and understand English.

**Study Design:** In this cross-sectional study performed from October 2012 to March 2013, employed questionnaires that were placed in offices, university class rooms and pharmacies, with prior permission of the respective departments/ institutions. Explanation regarding the study was provided via the explanatory statement and the consenting participants that fulfilled the inclusion criteria completed the questionnaire. The finished questionnaires were returned to a box that was placed at the selected study sites.

**Questionnaires:** A self-administered questionnaire was employed for this study that comprised of four parts which included personal details, basic health status, non-prescription medication use and level of awareness. No data was requested from the questionnaire that could lead to the identification of the participants. The questionnaire was validated via a pilot study done among 30 subjects. All scales had good internal consistency with cronbach alpha value of more than 0.8.

All data collected were entered into SPSS version 20.0. Non-parametric descriptive analysis and chi-squared tests were employed for evaluation.<sup>15</sup>

## **Results**

The preliminary results of this on-going study included three hundred and sixty four completed questionnaires and all the data was included in the analysis. Of the 364 respondents, 116 (31.6%) were male and 248 (67.6%) were female. Approximately, half the population was between 18 to 25 years of age reflecting the fact that almost half of the participants were students, while the other half was employed and a third of them were married. Self-declared weight and height was used to calculate the body mass index (BMI) of the participants which was compared to the World Health Organization's BMI classification for Asians.<sup>16</sup> Of the participants, 12% were obese, 29% were overweight, 13% were underweight and only 38% were of normal weight. Almost half of them had a history of chronic illness in the family with diabetes and hypertension being the most common followed by cardiovascular disease. Fifty eight (16%) participants were on regular prescription medications for various conditions.

**Consumption of OTC medication:** Overall, 308 (84%) participants consumed OTC medications. The number of males that consumed OTC drugs was significantly higher when compared to females ( $\chi^2$  (1, n=363) =6.27, p=0.012). The number of people below the age of 25 that used OTC drugs was significantly higher when compared to people at the aged 25 and above ( $\chi^2$  (1, n=352) =10.55, p=0.001). There were no significant associations between the use of OTC drugs and body mass index ( $\chi^2$  (3, n=336) =0.692, p=0.875) and family history of illness ( $\chi^2$  (1, n=366) =0.11, p=0.741). The OTC medications that were commonly consumed among Malaysians are shown in Figure 1 (Appendix 1). Supplements/ vitamins (41%) were the most frequently used OTC medications followed by painkillers (27%), flu/ cough remedies

(27%), sore throat products (27%) and medication for skin care (23%). Most of the participants purchased the OTC medications from the pharmacy (69%) with the rest obtaining them from the retail shops.

**Reason for consumption of OTC drugs:** Minor illness was the most common (91.2%) reason for the use of OTC medications. However 12 participants (3.9%) used OTC drugs for severe illness as well. Almost half the population stated that self-prescription was more convenient (53%), easier to access (51%) and time-saving (42%), when compared to consulting a doctor. About 43% of the participants also thought that consulting a doctor was unnecessary as the condition that required self-medication, was a minor problem.

**Knowledge and attitude regarding OTC medications:** About 82% of the respondents stated that their level of knowledge regarding OTC medications was moderate to low. Eighty one percent of the participants said that they would stop using the OTC drug if it did not work within the proposed time frame, while a small number of them would increase (7%) or decrease (5%) the dose. Almost three quarter of the subjects sought for advice regarding OTC medications and 61% of them obtained this advice from the pharmacists, while 33% from friends or family and 28% from the doctor. The participants' views on 14 statements regarding the safety and effectiveness of the use of self-medication are presented in Table 1 (Appendix 2). It is noteworthy that out of the 58 participants who were on regular prescription medications, only 35% agreed that OTC drugs could interfere with the prescribed ones, while the rest either 27% disagreed or were unsure.

## **Discussion**

This study has identified that 85% of the urban participants consume OTC medications which is comparable to another study done among the Malaysian population which showed that 75% of the participants used self-medications.<sup>8</sup> Previous reports have demonstrated a wide variation in the frequency of OTC drug use, ranging from 25-75%,<sup>3-7</sup> which may be due to the different socio-demographic background and different methodologies adapted in the studies.

The results of many studies have pointed out that analgesics were the most commonly used self-medication, followed by cough remedies and supplements.<sup>5,6,8,17</sup> Our study also shows that painkillers, flu/ cough remedies and sore throat products were commonly consumed drugs. However, it was found in our study that supplements and vitamins were more frequently used than the rest of the medications. This was similar to the results from an American study and it may be attributed to the perception that supplements are safe, effective and a necessity for good health.<sup>18</sup>

Minor illnesses such as fever, pain, cough, cold were the most common indication for using OTC drugs. For these indications, self-medication was the preferred option among the majority, when compared to consulting a doctor, as this was more convenient, easier to access and time-saving. These medications were most of the time obtained from the pharmacists with a few of the participants purchasing them from retail shops. Other studies have also quoted similar results.<sup>3,10</sup> In the recent years, many pharmacies have been strategically located in convenient places such as shopping malls and supermarkets, with a wide display of advertisements. This has resulted in easier access to OTC drugs from the pharmacies. Along with this, the busy schedule of the students and working people, incline them more towards the option of self-medication.

Majority of the participants stated that their level of knowledge regarding self-medication was moderate to low. Self-medications were consumed at recommended dosages and duration, by most of them. However, more than a third of them were unsure regarding the side effects and drug interactions of the OTC medications. This was similar to the results of other studies.<sup>10-13</sup> Furthermore, half of the participants, who were on regular prescription medications and consumed OTC drugs, were unsure or disagreed that there can be potential drug interactions between the prescribed and non-prescribed drugs. This lack of awareness may possibly lead to major and even fatal adverse events from the drugs. Hence, as suggested by Indermitte *et al*, efforts should be made to raise awareness regarding these drug interactions.<sup>13</sup> Pharmacists as well as health care professionals would be able to play a major role to overcome this identified issue.

## Conclusion

Self-medication is widely prevalent among the Malaysian population. The study shows that supplements and vitamins are most commonly consumed followed by analgesics, flu/ cough remedies and sore throat products. Participants had a higher level of awareness regarding the dosage and duration of OTC drugs compared to side effects and drug interactions. Hence, pharmacists and doctors should make the effort to educate the public on this deficiency in knowledge.

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**Conflict of Interest:** None.

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## APPENDIX 1

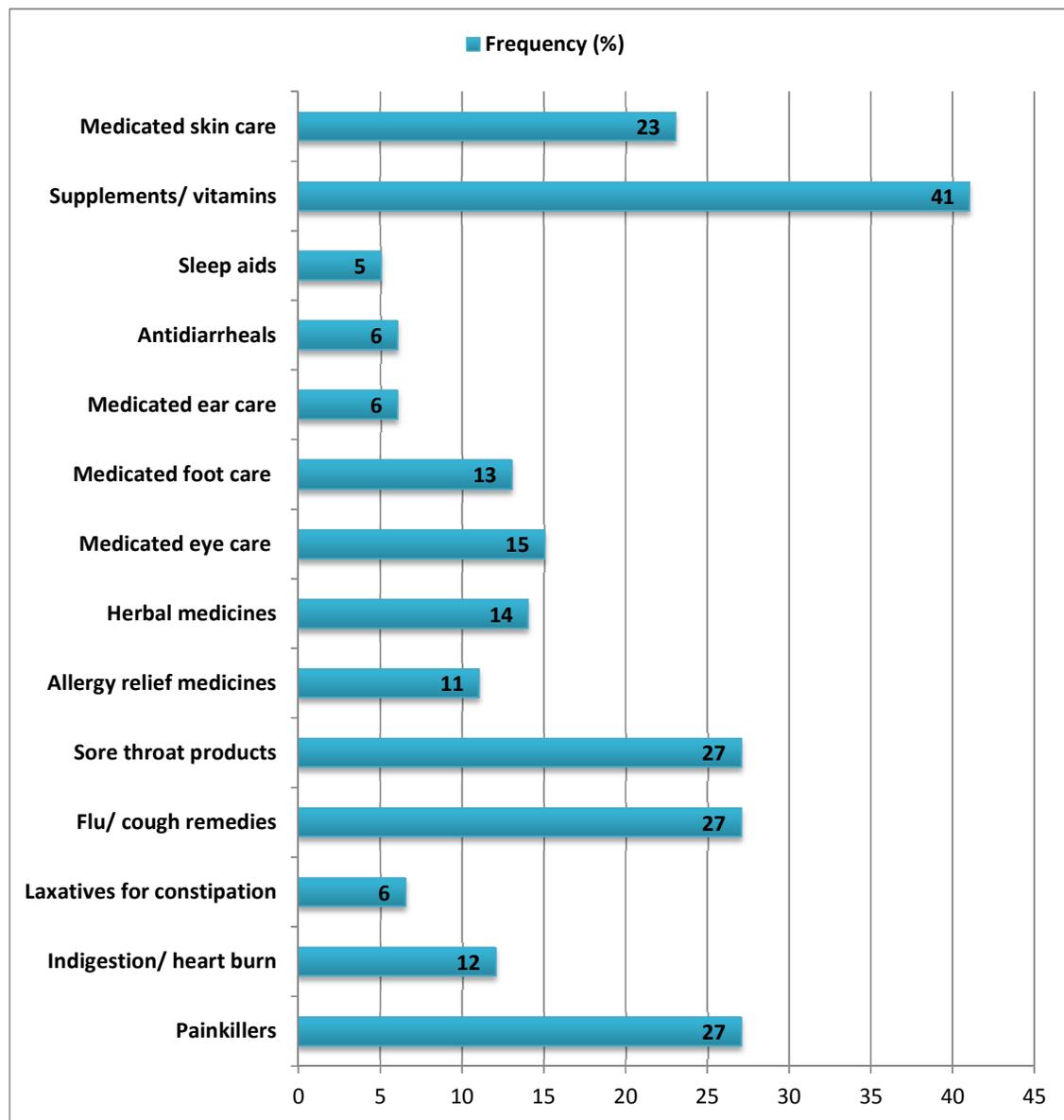


Figure 1: Consumption of OTC drugs

**Appendix 2**

<b>Table 1: Level of Awareness on OTC Drugs (Frequency - %)</b>			
	<b>Strongly agree/ agree</b>	<b>Strongly disagree/ disagree</b>	<b>Unsure</b>
OTC Drugs- better option compared to obtaining PMs from your doctor	42.2	21.8	33.8
Consuming OTC drugs are safe	37.1	21.5	39.5
OTC drugs could interfere with your natural healing process	27.2	27.2	42.2
With continuous use of OTC drugs, it may lose effectiveness	41.7	23.4	30.8
Continuous use of OTC drugs may result in adverse effects	32.2	32.2	31.9
Continuous use of OTC drugs may cause dependency or addiction	42.2	31.1	24
I consume OTC drugs according to recommended dosage	60.2	18	15.8
I follow recommended consumption duration of OTC drugs	52.9	22.6	17.2
I consume OTC drugs to get high or lose weight	10.4	65.9	15.8
I usually follow the instruction on the label of OTC drugs packaging	60.5	15.3	16.3
I obtain the desired outcome from the usage of OTC drugs	46.9	15	30.8
I had experienced adverse effects from the usage of OTC drugs	12.3	52.3	27.8
OTC drugs can sometimes worsen certain disease	31.6	28.1	34.3
OTC drugs could interfere with other prescribed medicines	32.7	23.7	37.9