Consumers' Knowledge, Attitude and Practices on Over-the-Counter (OTC) Medicine use in Cebu City

Gerard Lee See, Florencio Arce Jr, Joan Caño, Judey Ann Plaza

University of San Carlos – Department of Pharmacy

Research Article

Corresponding Author:

Gerard Lee See
University of San Carlos – Department of Pharmacy
Address: Nasipit, Talamban, Cebu City, Philippines 6000
Telephone number: +63(32) 2300-100 local 403
Fax number: +63(32) 2328162

Abstract

Objectives: The purpose of this study was to identify the commonly consumed OTC medicines and the factors that influence consumer's use of OTC and evaluate the consumer's awareness on OTC medicines.

Methodology: A total of 100 respondents participated in the study. Random sampling, using the odd – even basis, was used to select the respondents in the different drugstores in Barangay Tisa, Cebu City. Slovin's formula was used to compute for the sample size. A validated questionnaire was used in the study including queries on the knowledge, attitudes and practices of the respondents with regards to OTC medicine use.

Results and Conclusion: Results showed that the five most commonly consumed OTC medicines are: combination tablet of 10 mg phenylephrine HCl, 2 mg chlorpheniramine maleate, and 500 mg paracetamol, a tablet of 500 mg paracetamol, a tablet of 10 mg bisacodyl, a capsule of 2 mg loperamide, and a combination tablet of 178 mg aluminium hydroxide, 233 mg magnesium hydroxide, and 30 mg simethicone. Tri - media and pharmacists advice were the factors that influenced the respondents' OTC medicine use. Respondents' awareness on OTC medicine use needs improvement.

Keywords: over – the – counter medicines use, knowledge, attitude, practices, Cebu City

Introduction

In the Philippines, medicines are classified as over – the – counter medicine and prescriptions medicines. Over – the – counter medicines are those drugs which do not require patient prescription prior to dispensing the medicine. OTC medicines play an increasingly vital role in health care system and are the most prevalent means of treating the majority of common health problems [1]. Furthermore, it is one aspect of growing a movement towards medical self – care and has become a tool in gaining control over one's health [2].

Patients understand their illness within their own conceptual framework, which includes their own beliefs, thoughts and feelings. They process that information and then make their own decision and act [3]. Humans experience various ill symptoms and may choose to treat the symptoms or leave the experienced symptoms as they are. This behaviour has an influence in patient's future decision regarding medication taking and other health – related behaviours [4].

Self – medication is a state in which patients take medicines in their own initiative or on advice of a pharmacist, without professional supervision. It includes acquiring medicines without prescription, resubmitting old prescriptions to purchase medicines, sharing of medicines with relatives or medicines of one's social circle or using left over medicines stored at home. This practice is becoming common in various countries due to lack of access to health care, easy availability of OTC medicines in the market and poor drug regulatory practices [5][6]. Self – medication is one of the major reasons for irrational use of medicines. These practices are mostly experienced for the OTC medicines. Social and economic factors are the main reasons that compel the individual to take a medicine without an appropriate diagnosis and surveillance of the medical therapy [7]. It is a common practice among Filipinos to use medicine when experiencing discomfort such as headache, runny nose, cough, fatigue, and stomach ache. In fact, 83.4% of residents of Cebu City are practicing self – medication [8]. The concept of self – medication has been adopted worldwide and even promotes individual family and community participation in primary health care. This together with poor awareness leaves the people uninformed about the potentially adverse and lethal effects of these medicines [9].

Nowadays people are keen to accept more personal responsibility for their health status and to obtain as much sound information as possible from expert sources in order to help them make appropriate decisions in health care. Pharmacists have a key role to play in providing them with assistance, advice and information about medicines available for self-medication [10].

Currently, there are no documented studies on the OTC medicine use in Cebu City. This study will validate the pharmacist's role in information dissemination regarding OTC medicine use. The study aimed to identify the commonly consumed OTC medicines, identify factors that influence consumer's use of OTC, and evaluate the consumer's awareness on OTC medicines

This study will provide baseline data on the awareness of the consumers on OTC medicine use as a basis for the community pharmacists in the provision of OTC medicine information appropriate to the level of the consumers. Moreover, the data of this study will be beneficial for the academe as a basis for incorporating up – to – date experience on patient knowledge on OTC medicines to contents in teaching.

Material and Method

Research Design
This was an exploratory, descriptive research. Random sampling, employing odd – even scheme, was used in the selection of respondents. On – site personal interview of the respondents was conducted. Slovin's formula was used in the determination of sample size. A total of 100 respondents were included in the study.

Research Instrument
The research instrument used was a structured questionnaire written in English and Local dialect to capture respondents' accurate answers. The questionnaire was validated among the 10% of the total intended respondents. The instrument contains queries on disease management, medications used, factors influencing knowledge, and awareness on OTC medicines.

Data Collection and Procedure
A letter of permission was sent to the local government unit of Barangay Tisa, Cebu City for formal endorsement in the implementation of the research. Another letter was also sent to the intended pharmacy to seek permission for the conduct of the research.

After seeking approval, the researchers went to the drugstores and using the odd – even scheme, every even numbered respondent who entered the drugstore was approached by the researchers and asked to voluntarily participate in the survey. For those, respondents who declined to participate, the next even number was considered.

Statistical Analysis
This data of this study was calculated using percentages by dividing the frequency of responses over total number of respondents. Furthermore, other statistical analyses were run using the SPSS v.12.

Results & Discussion

Demographics
There 100 respondents included in this study with age ranging from 18 – 80 years old (mean=35). In terms of the gender, 30% were male while 70% were female. For the educational background, 83% of the respondents had college education while 17% of the respondents had high school education.

Self – medicated Diseases Reported by Respondents
Diseases mentioned by respondents which they managed thru self – medication were the following: fever, cough, colds, flu, body pain, headache, toothache, muscle cramps, hyperacidity, allergy, constipation, and diarrhoea.

OTC medicines consumed by respondents
The OTC medicines consumed by respondents include the following: 500 mg Paracetamol tablet, 500 mg Carbocisteine capsule, 200 mg Ibuprofen capsule, a combination tablet of 15 mg Dextromethorphan hydrobromide, 10 mg of Phenylephrine hydrochloride, and 325 mg Paracetamol, a combination tablet of 250 mg Paracetamol, 150 mg Propyphenazone, and 50 mg Caffeine, a combination tablet of 10 mg Phenylephrine hydrochloride, 2 mg Chlorphenamine maleate, and 500 mg Paracetamol, a combination chewable tablet of 178 mg Aluminum hydroxide, 233 mg Magnesium hydroxide, and 30 mg Simethicone, 10 mg Ceterizine dihydrochloride tablet, 10 mg Loratadine tablet, 5 mg Bisacodyl sugar – coated tablet, and 2 mg Loperamide hydrochloride capsule.

Specific Disease Management
This part presents the different medicines taken by patients when experiencing specific disease mentioned above. Results showed that 85.7% of the respondents take 500 mg Paracetamol tablet when they experience headache. For cough with phlegm, 54.1% of the respondents take 500 mg Carbocisteine. When respondents experience colds, they reported the use of 200 mg Ibuprofen (30.8%), a combination tablet containing 15 mg Dextromethorphan hydrobromide, 10 mg Phenylephrine hydrochloride, and 325 mg Paracetamol (17.3%), a combination tablet containing 250 mg Paracetamol, 150 mg propyphenazone, and 50 mg caffeine (15.4%). For flu, majority (92.3%) of the respondents take a combination tablet of 10 mg Phenylephrine hydrochloride, 2 mg Cholphenamine maleate, and 500 mg Paracetamol. For body pains such as muscle cramps, toothache, and headache, most respondents take 250 mg Mefenamic acid (66.1%), and a combination capsule containing 325 mg

paracetamol, and 200 mg Iburpofen (19.4%). When respondents experience hyperacidity, majority of them (88.7%) take combination chewable tablet containing 178 mg Aluminum hydroxide, 233 mg Magnesium hydroxide, and 30 mg Simethicone . When having allergy, 57.1% use 10 mg ceterizine tablet while 42.9% use 10 mg loratadine tablet. For constipation, most respondents (91.7%) use 5 mg bisacodyl chewable tablet. Lastly, when they experience diarrhea, 63% of the respondents use 2mg loperamide capsule.

Influence and Knowledge on OTC medicine use

Result showed that 50% of the respondents were influenced by the pharmacists on their OTC medicine use while fifty 70% of the respondents were influenced by the tri – media.

Results revealed that 88% of the respondents said that they know about the proper dose of OTC medicine which they utilize for specific diseases. In terms of the way OTC medicines are kept, 41% of the respondents kept it in medicine organizer, 19% of the respondents kept it in cabinets, and 14% of the respondents kept it in refrigerators. Furthermore, 77% of the respondents indicated that they have not experienced any adverse effects and/or side effects with OTC medicine use while 12% were able to experience these adverse effects and 11% were unsure about it.

Majority of the respondents (80%) indicated that prescription medicines are safer than OTC medicines and that it is more appropriate to consult a health professional than to do self – medication (93%). More than half of the respondents agreed that self – medication is applicable to minor illness (68%), that one should be cautious in taking an OTC medicine (67%), and that OTC medicines are for emergency purposes (54%). Furthermore, 75% of the respondents said that they read the label of the purchased OTC medicine before consuming. Half of the respondents stopped taking OTC medicine when side effects attributed to the OTC medicine were experienced.

Taking medicine is a regular part of people's daily routine, and for them it tends to cure diseases and improve health without knowing that there are possible unwanted side effects that range from less serious to severe ones [11].

Self – medication is the most common response in the management of illnesses. Respondents declared practices such as self – medication using OTC medicines rather than seeking physician advice and every time an illness appears they tend to self-medicate by following the previously prescribed medication. Furthermore, this study is parallel with a study conducted in Nepal wherein self – medication was attributed to lack of time to see a doctor, inability to get a quick appointment, illness may be too mild, inaccessible physicians, and unaffordable physician's consultation fee. In a study done by Patiño in 2010, cost – effectiveness and popularity of medicine drives them to buy and self – medicate with such products. In this premise, pharmacists have a greater responsibility towards their consumers in self - medication and increased need for such accountability [5][12].

Self-medication is, in the majority of cases, applied without medical supervision and, to a certain extent, is an uncharted area with regard to interactions, pregnancy, lactation, use in children and the elderly, driving, working conditions, alcohol, or food compared to the more controlled prescription-only environment. In many countries, the possibility of reporting adverse drug reactions (ADR) to self-medication products is not available since many conventional ADR reporting schemes operate through health care professionals. Only in a small number of countries with highly developed ADR systems are patients and consumers able to report ADRs directly to the authorities or through pharmacies. Moreover, clinical trial data for prescription use may not necessarily be valid for self-medication [13].

Drug information source among the respondents is insufficient since they rely on previously held knowledge and practice seeking advice from family members on medication use. In the Philippines, use of tri - media advertisements for OTC medicines are uninhibited from the public. Variations of OTC medicines are advertised through the television, aired through the radio and published in prints. Furthermore, medicine advertisements in the Philippines are designed to educate the public on specific disease managements such as symptoms of the disease, dose, and brand. According to a recent study by Dimitrijevic, the influence of media on level of self – medication and decision on the use of OTC medicines is statistically significant [14].

It was also observed that pharmacist were sources also of information for OTC medicine use but not as high as that of the tri – media. This would show that Pharmacists in Cebu are not very proactive as to providing OTC medicine information. It is the role of pharmacists to initiate dialogue with the patient and provide objective information about OTC medicine. Provision of advice to consumers to aid them make informed health choices must be done by pharmacists.

Not all of the consumers are aware about the safety and efficacy of the OTC medicine use. This is also parallel with a study conducted in Jordan wherein 31.5% of the parents declared that OTC medicines are safe regardless of how frequently they are used and 39.2% were not aware that OTC medicines can possibly cause serious interactions [15]. Moreover, self – medication poses risk to consumers such as habituation, allergic reactions which may be severe and fatal, under – dosage may result to sub therapeutic effects while over – dosage may result to organ damage [5]. Thus, there is a dire need to raise awareness among consumers on OTC medicine use.

Conclusion & Recommendations

The top five most commonly consumed OTC medicines are: combination tablet of 10 mg phenylephrine HCl, 2 mg chlorpheniramine maleate, and 500 mg paracetamol, a tablet of 500 mg paracetamol, a tablet of 10 mg bisacodyl, a capsule of 2 mg loperamide, and a combination tablet of 178 mg aluminium hydroxide, 233 mg magnesium hydroxide, and 30 mg simethicone.

Tri - media and pharmacists advice were the factors that influenced the respondents' OTC medicine use. Respondents' awareness on OTC medicine use needs improvement.

Provision of workshop on OTC medicine utilization in Cebu City must be conducted among community pharmacists emphasizing on adverse effects, proper dosage, and decision – making on the selection of OTC medicine to enhance good pharmacy practice in the community setting. On the other hand, pharmacists must provide sufficient time to consumers purchasing OTC medicine in a drugstore as there is a dire need to raise awareness on OTC medicine use.

Acknowledgement

References

1. U.S. Food and Drug Administration. Drug Applications for Over – the Counter (OTC) Drugs. [Internet]. 2015. Available from: http://www.fda.gov/drugs/developmentapprovalprocess/how drugsaredevelopedandapproved/approvalapplications/over-the-counterdrugs/default.htm

2. Kaufman, DW, Kelly, JP, Rosenberg, L, Anderson, TE, Mitchell, AA. Recent patterns of medication use in the ambulatory adult population of the United States: the Slone survey. *Journal of the American Medical Association (JAMA)*. 2002: 287(3):337-44.

3. Kilwein, JH, Wertheimer, AI, Smith, M. The Pharmacist and public health in pharmacy practice, social and behavioral aspects. 3rd Edition. P. 389

4. Tagede, TA. A prospective study on self-medication practices and consumers drug knowledge in Addis Ababa BS Pharm. B.A. Addis Ababa University

5. Mehta, RJ, Sharma, S. Knowledge, attitude, and practice of self – medication among medical students. *IOSR Journal of Nursing and Health Science (IOSR – JNHS)*. 2015: (4):1: 89 – 96.

6. Filho, AID, Lima – Costa, MF, Uchooa, E. Bambui project: a qualitative approach to self – medication. *Cad. Saúde Pública*. 2004: 20(6).

7. Almalak, H, Albluwi, AI, Alkhelb, DA, Alsaleh, HM, Khan, TM, Hassali, MAA, Ajadhey, H. Students' attitude toward use of over the counter medicines during exams in saudi arabia. *Saudi Pharm Journal*. 2013:2:(22), 107 – 112.

8. Yaun, E. Self – medication practices among the residents in Cebu City, Central Philippines. University of San Carlos Graduate thesis. March 2015.

9. Algahim, SA. Self – medication practice among patients in a public health care system. *WHO – Eastern Mediterranean Health Journal*. 2011.

10. Gutema, GB, Gadisa, DA, Kidanemariam, ZA, Berhe, DF, Berhe, AH, Hadera, MG, Hailu, GS, Abrha, NG, Yarlagadda, R, Dagne, AW. Self – medication practices among health sciences students: the case of Mekelle University. *Journal of Applied Pharmaceutical Science*. 2011: 01 (10), 183 – 189.

11. Fischhoff, B, Brewer, NT, Down, JS. Communicating risks and benefits: an evidence – based user's guide. *Food and Drug Administration, US Department of Health and Human Services*. 2011.

12. Patiño, L. Antimicrobial resistance in developing countries. [Internet]. 2010. Available from:http://www.academia.edu/3041975/Antimicrobial_resistance_in_developing_countries.

13. World Health Organization Drug Information. The benefits and risk of self – medication. [Internet]. 2000. Available from: http://apps.who.int/medicinedocs/en/d/Jh1462e/1.html#Jh1462e.1.1

14. Dimitrijević, M, Catić-Djordjević, A, Stefanović1, N, Pavlović, D, Veličković-Radovanović, R. Self – medication in primary healthcare in the territory of Nis. *Acta Medica Medianae*. 2014;53(3):19-24

15. Younes, AA, Tahaineh, L, Moumani, B. Parent's knowledge, perception, and practices of over – the counter medicines used for their children. *Jordan Journal of Pharmaceutical Sciences*. 2011: (4)3, pp. 181 - 189