

## Assessment of Lebanese Community Knowledge about Over the Counter Common Cold and Cough Medications

Fouad Sakr<sup>1\*</sup>, Maha Abi Jaoude, Mariam Dabbous<sup>1</sup>, Marwan Akel<sup>1</sup>, Michelle Cherfan<sup>1</sup>, Jihan Safwan<sup>1</sup>, Mohammad Iskandarani<sup>1</sup>

<sup>1</sup>(School of Pharmacy – Lebanese International University)

<sup>\*</sup>(Corresponding author: Fouad Sakr, PharmD – Email: [fouad.sakr@liu.edu.lb](mailto:fouad.sakr@liu.edu.lb))

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**Abstract : Background:** The purpose of this study is to evaluate patients' knowledge and level of awareness about OTC common cold and cough medications in Lebanon. **Methods:** This is a cross-sectional observational community-based study. Patients aged 18 years and above were included. The primary outcome measure is assessment of patients' knowledge about OTC common cold and cough medications. The secondary outcomes included identification of the sources of patients' information, and factors that influence their drug selection. **Results:** Most patients had good knowledge about OTC common cold and cough medications. As well, most patients were found to read the drug information present on the label, yet not all of them fully understand the drug label. Finally, the major factor that influenced patients' selection for an OTC common cold and cough product was a recommendation by a community pharmacist. **Conclusion:** Good overall knowledge and level of awareness was found in the Lebanese community with respect to the use of OTC common cold and cough medications. However, most patients were unable to fully understand drug labels. Hence, this requires greater educative efforts from the community pharmacists to ensure an optimal self-care of common cold and cough.

**Keywords** – Common cold, cough, Lebanese community, over the counter, self-care

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### I. INTRODUCTION

Acute upper respiratory tract infections are among the most common reasons to seek medical care. As well, common cold is one of the most common infectious diseases encountered worldwide. It often requires medical attention to alleviate the bothersome symptoms including cough. Frequently used pharmacological treatments include over the counter (OTC) antihistamines, decongestants, cough suppressants, and expectorants. These drugs can be used alone or in combination [1-3]. Yet, there is lack of good evidence to determine the effectiveness of any OTC product at reducing the frequency or severity of cough in children or adults; and some studies recommend against the use of these medications [4-6]. In Lebanon, over the counter use of common cold and cough medications is growing in the community due to their availability, efficacy, and low price. However, knowledge about these medications may not be sufficient. The purpose of this study is to evaluate patients' knowledge and level of awareness about OTC common cold and cough medications in the Lebanon.

### II. MATERIALS AND METHODS

**2.1. Study design:** This is a cross-sectional descriptive community-based study. A structured questionnaire was used to investigate the knowledge, attitudes, and practices of patients regarding self-care of common cold and cough using OTC common cold and cough medications.

**2.2. Study population:** The study was conducted in random community pharmacies over Lebanon. All patients aged 18 years and above were eligible to participate in the study. Health care professionals as physicians, pharmacists, and nurses were excluded. Furthermore, patients with neurologic problems affecting their mental activity were excluded as well. After providing informed consent, participants were asked to fill in the study questionnaire.

**2.3. Study tools:** The questionnaire was developed by the authors. A pilot study on a random sample of 20 patients was conducted prior to data collection; and necessary adjustments to the questionnaire were made to improve clarity, consistency, and reliability of the results. The data obtained during the pilot study were not included in the final analysis.

The questionnaire was first prepared in English and then translated to Arabic. The questionnaire included close-ended questions and consisted of 3 sections. The first section included demographic characteristics. Age, gender, smoking and alcohol habits, allergies, chronic diseases, and medications were all assessed. The second section consisted of 13 questions that investigated participants' knowledge about OTC common cold and cough medications. The third section consisted of 5 questions and identified the sources of information regarding OTC common cold and cough medications.

**2.4. Data analysis:** Data were analyzed using SPSS Statistics for Windows software, version 21. Each factor was treated by simple frequency. Missing data were excluded from analysis.

### III. RESULTS

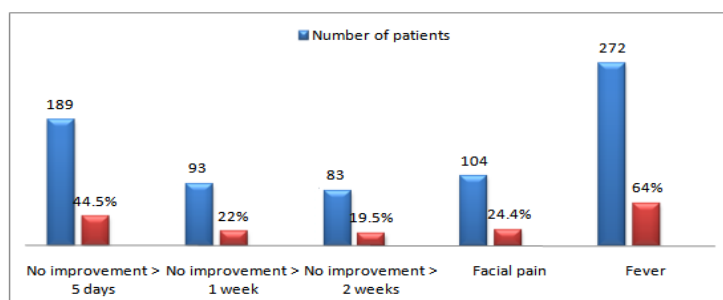
**3.1. Demographic characteristics:** A total of 600 questionnaires were filled by patients at random community pharmacies over Lebanon. Only 423 patients were eligible and included in the analysis. Most participants (44%) were between 18 to 30 years of age. Females were more than males (53.7% and 46.3% respectively). Table 1 summarizes the demographic characteristics of participants.

**Table 1:** Demographic Characteristics

Variable	Frequency	Percentage
<i>Age</i>		
18 – 30 years	188	44.4
31 – 50 years	126	29.8
> 50 years	109	25.8
<i>Gender</i>		
Female	227	53.7
Male	196	46.3
<i>Smoking status</i>		
Smoker	198	46.8
Non Smoker	225	53.2
<i>Alcohol use</i>		
Positive alcohol intake	177	41.8
Negative alcohol intake	246	58.2
<i>Chronic diseases</i>		
Chronic disease present	110	26.0
- Cardiac disease	44	10.4
- Endocrine disease	35	8.3
- Gastrointestinal disease	15	3.5
- Others	16	3.8
Chronic disease absent	313	74.0

**3.2. Knowledge about OTC common cold and cough medications:** Most patients indicated that OTC drugs of common cold and cough cannot be used by anyone regardless of age and co-morbidities (60%) and that not all of those drugs are safe to be used in pregnancy (70.4%). However, the majority (85.1%) stated that all OTC common cold and cough medications can be used concomitantly with acetaminophen containing drugs safely. Moreover, 58.9% patients found that systemic agents are better than locally acting ones. Furthermore, a large number of patients did not know the side effects associated with the use of these drugs (61.7%). Similarly, patients who have some information about the adverse events gave different combinations of answers including allergy, insomnia, and diarrhea as most common side effects (23.6%, 22.9%, and 17.7% respectively).

**3.3. Exclusions for self-care of common cold and cough using OTC medications:** The reasons for patients to stop self-treatment with OTC common cold and cough medications and seek primary medical care were variable. Patients were allowed to select multiple options. The most common reason was high grade fever followed by no improvement of medical condition for more than 5 days. The frequencies of these reasons are illustrated in Fig. 1.



**Fig. 1:** Identified reasons to stop self-care with OTC common cold and cough medications and seek primary medical care

**3.4. Criteria for selection of medications:** Most patients reported that their choice of a specific drug is based on the pharmacist recommendation (73.5%). In addition to the pharmacist, the choice was also based on a previous experience about the use of a specific product (29.3%). While selecting a specific OTC common cold and/or cough medication, the final decision to get the drug or not was based on the indication for use (55.1%), followed by the type or class of the drug (43.3%), and the cost of therapy (38.5%).

**3.5. Understanding the drug facts:** More than 80% of patients were found to read the drug label before utilizing it. However, 53% of them understand only partially the information written; and the pharmacist was identified as the most common source of reliable drug information.

#### **IV. DISCUSSION**

The study found good knowledge about the proper use of OTC common cold and cough medications, with multiple few gaps. A big number of patients doesn't know the adverse events associated with the use of OTC common cold and cough products. Similar gaps were found by Hughes et al in a study published in 2002 [7]. Similarly, more than half of the patients don't fully understand the drug label. The level of education and language barrier appear major reasons. Those findings are consistent with previous work reported in other countries as Saudi Arabia [8], Egypt [9], Sudan [10], and Jordan [11]. Similarly, the selection of a specific OTC common cold and/or cough medication is mainly influenced by the class of drug followed by the cost of therapy. For this, the educational level and socioeconomic status of the patients should have been studied and related to our findings since they could elaborate further the results; as other studies found that the majority of population practicing self-medication were of low socioeconomic status [12,13].

#### **V. CONCLUSION**

Good overall familiarity and level of awareness were found in the Lebanese community with respect to the use of OTC common cold and cough medications. As well, the community pharmacist was identified as a trustful and reliable source of drug information. However, we still need greater educative efforts from the community pharmacists to ensure an optimal self-care of common cold and cough.

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