CHARACTERIZATION OF THE PRACTICE OF SELF-MEDICATION IN UNIVERSITY STUDENTS

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REINVESAD, RESEARCH NETWORK ON PUBLIC HEALTH AND CARE FOR DEVELOPMENT PROBLEMS

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— Abstract—

This document exposes the characterization of the practice of self-medication in college students. The self-medication rate found in this study is alarming, and medications that are mostly consumed, correspond to the category of OTC. Otherwise to that found in other studies, the main drug consumed is acetaminophen, followed by drugs for influenza. It is important to mention that they consume acetaminophen as an analgesic.

With knowledge, and responsible self-medication could be useful for the first level of health care, but the population is not yet prepared to avoid consequences from not indicated and indiscriminate use of drugs with adverse consequences for their health.

Keywords

self-medication, public health, undergraduate.

To speak of self-medication, in the broad sense of the concept, is to refer to self-care through a set of activities carried out by the individual without the assistance of a health professional (WHO, 1985). Likewise, when referring to self-care, this implies the actions of prevention, diet, physical exercise, moderate consumption of alcohol, avoidance of tobacco consumption and drug abuse.

However, self-care also extends to the patient's ability to resort to the use of over-the-counter medications; paradoxically, this is what the term is currently reduced to. We are talking about three decades after the definition made by WHO.

Given the conception of the term self-medication in the open population, it is reflected as a serious public health problem that needs to be studied and addressed from the various disciplines and in the context of the political, economic, cultural and psychological determinants that operate in the global process. Among the common consequences are adverse reactions, complications for timely and adequate diagnosis, and drug resistance (López *et al*, 2009).

In this regard it is necessary to remember that pharmaceutical drugs are differentiated between over-the-counter and restricted-sale ones, that is, sale only by medical prescription. Although this differentiation is due to the risks of its use, it is also true that over-the-counter medications do not necessarily produce side effects in the face of inappropriate use, frequency or overdose, becoming a risk for people. Given this, each country must take measures and actions to ensure the safety, quality and effectiveness of medicines and monitoring their commercialization (FIP, 1996, Kregar and Filinger, 2005) and should also consider frequent monitoring of consumption and long-term impact.

Accessibility and lack of drug use control exacerbate the problem, especially if we talk about the lack of responsible self-care habits. In addition to this, the cultural variables related to public health leave populations in a situation of high vulnerability to the adverse reactions of the indiscriminate use of over-the-counter medicines and even prescription drugs, such is the case of antibiotics, which in many countries continues to be difficult to control and the consequences in terms of drug resistance (DR), multidrug resistance (MDR) and that have culminated in complicated cases of extreme drug resistance (X-DR).

However, studies have been conducted in Mexico that show more than 94% of self-medication in the Mexican population, both in large and medium-sized cities. In both cases, the traditional medical care habits prevailing in different ethnic groups of the country are reflected as a variable of interest (Soto and Roa 2004; Reyes-Guillén, 2015). That is, there are self-care habits with the concomitant use of medicinal plants, other alternative techniques and allopathic medicines. This condition makes evident that the complete therapeutic knowledge is not guaranteed, let us add to the supra, the language factors (indigenous languages, other than Spanish) and literacy. While the former prevents communication in a high percentage due to ignorance of the language, the latter, in the case of speaking Spanish, are rarely literate bilinguals.

The aforementioned figure can be considered as very important if we consider that at a global level, there is a large percentage of the population that practices self-medication, Venezuela shows 87% of students who practice self-medication (De Pablo, 2011); Spain with 69% (Nefi, 2008); 55.4% for Barranquilla Colombia (Peñuela and De la Espriella, 2011) and 27.3% for Suba in Bogotá, Colombia (López *et al* 2009).

For the previously described, a self-medication study was conducted in a population of university students in San Cristobal de Las Casas, Chiapas, Mexico, with the main objective of finding the self-medication profile and the variables that can explain it.

OVERALL OBJECTIVE

Describe the profile of self-medication in young university students.

METHODS

The present study is an exploratory and descriptive cross-section on self-medication in young university students.

Phase 1. Measurement of self-medication frequency

A survey was conducted with random sampling. A questionnaire was applied from person to person to a sample of 200 university students enrolled in Social Sciences and Law programs of the Universidad Autonoma de Chiapas.

The survey instrument was designed for the measurement of socioeconomic variables, pharmaceutical self-medication habits, reasons for not consulting the doctor and the reason to prefer self-medicate.

*Phase II. Statistical analysis to identify the association of
self-medication with socio-cultural factors*

Using the SPSS v18 package, a correlation analysis of the self-medication was carried out with the socio-cultural variables established in the survey.

RESULTS

The present investigation was conducted in San Cristobal de Las Casas, Chiapas, Mexico during the period from February 2015 to February 2016. The study population was of university students enrolled in the Faculty of Law and the Faculty of Social Sciences, taking a sample in equality of proportions with respect to the Faculty of belonging and gender (total sample n= 200).

The average age of the young people interviewed is 20 years old and a 42% are originally from San Cristóbal de Las Casas. The remaining 58% are from different parts of the state, without registering any case from another state or country. The most frequent localities of origin are Comitán de Domínguez and Tuxtla Gutiérrez, capital of the state of Chiapas. Regarding the mother tongue, 18% of respondents correspond to indigenous mother tongue, mainly Tsotsil, followed by *Tseltal* and *Chol*.

Regarding the frequency of medical appointments for general check-ups or health control, 39% state that they go to the doctor periodically for general check-ups; 7% do not go to the doctor and 54% go to the doctor only when they feel ill.

Of the cases that go to the doctor and receive medical prescription, 66% acquire the indicated medication; 34% do not acquire it; they do not buy the medicine because the pharmacy of the public health services does not have it, or because it is very expensive and they do not have the resources to acquire it. Of the percentage that acquires the medicines, it does it mainly in the pharmacy (70%); but 30% acquires it in a grocery store.

Regardless of whether they have the habit of visiting the doctor, the drugs they consume mostly and that they buy without a prescription, in pharmacy and/or grocery store are, acetaminophen (100%); drugs for influenza (85%); vitamins (42%) and deworming (10%), in minimal percentages were mentioned medicines for allergies, anti-inflammatory and muscle relaxants (1-3%).

Regarding self-medication, 100% responded that they do, mainly if it is to remove the discomfort felt by common palliatives, because the medication

is easy to use and avoid medical visits. Regarding the care of the indications and expiration date, specified in the medication, 75% mentions that they read them; 25% mentioned that they do not read them.

No statistically representative relationships were found between the gender, mother tongue, place of origin and self-medication condition variables.

DISCUSSION AND CONCLUSION

The percentage of self-medication in the population of university students is high (80%), although lower than the 95% found in the study previously performed on the open population, that is, self-medication in the general population of the same area (Reyes- Guillén *et al*, 2015). Also, it is lower than the one found by Soto Roa (2004) in the university population of the central zone of the same country, Mexico (96%).

Some studies carried out in other countries indicate a lower percentage of self-medication in university students (38%), and much less in the open population, 27.6% (Bassols *et al* 2002); but there is a coincidence with the groups of drugs consumed, analgesics and anti-flu drugs (Souza *et al*, 2011).

The results found in this study are similar to those found by Guillem *et al.*, 91% (2010) and those found in studies for the university population of Argentina, 85% and Palestine, 98% (Sawalha, 2008).

Likewise, the results of this study prove that the reasons that lead people to self-medicate are pain and mainly do so to avoid going to the doctor and the expenses that this implies (Laporte and Castel, 1992). Therefore, it is important to discuss the characteristics of the study population, emphasizing the cultural diversity of the area. The study showed an indigenous population of 18% corresponding to university students of *Tsotsil*, *Tseltal* or *Chol*, whose customs are related to populations of Mayan origin. In this culture, self-medication and traditional medicine are a constant practice, currently applied not only to over-the-counter products or pharmacological specialty advertising, but also to patent and/or generic products without a prescription.

While it is true that the percentage of self-medication among university students in this study is high, it is also true that the type of medication they consume corresponds to the category of over-the-counter. Contrary to what was found in other studies (Laporte and Castel, 1992, Soto Roa, 2004, Sawalha, 2008, Souza *et al*, 2011, Reyes-Guillén *et al* 2015), the main

medication consumed is acetaminophen, followed by influenza drugs. It is very important to mention that they consume acetaminophen as an analgesic, regardless of the type of analgesic and its antipyretic nature.

Specifically, acetaminophen is associated with the development of neutropenia, granulocytopenia, pancytopenia and leukopenia; if it is consumed in a prolonged manner and in high doses, it can cause kidney damage and even hepatic necrosis and there are several contraindications for its use, for example, in patients with liver damage, who receive hepatotoxic drugs or who have nephropathy (Morón and Levy, 2002), these data are alien to the common knowledge of the population and, therefore, are vulnerable to negative consequences due to their use without specific medical indication.

As part of the results found, it should be noted that students self-medicate mainly with vitamins (42%) and deworming (10%). Regarding this, these results coincide with De Pablo (2011), having found in their study with university students the consumption of vitamin with 56% and deworming with 15%.

We can emphasize that the use of vitamins indiscriminately, may be due to the constant advertising in television and magazines, as mentioned by Baos (1996) and De Pablo (2011), and is associated with popular belief that improves performance academic and has commonly been used across generations.

Although several studies argue that vitamins are drugs with lower risk of toxicity and adverse effects, these depend, to a large extent, on the activity, gender, age and existence or not of primary alterations at the renal or hepatic level. Among the most frequent adverse reactions or side effects related to mega doses of vitamins, are diarrhea, anxiety or panic attacks, palpitations, insomnia, respiratory problems, chest pain, rashes and hives (Thomas, 2016).

On the other hand, regarding the use of deworming drugs, they are used in a habitual way by families as a response to the continuous advertisement, the previous thing, without knowing the specific uses of the different deworming chemicals that are offered for their purchase. The consumption of this type of drugs has contraindications such as in the case of acute diarrhea, headache, nausea, dry mouth and metallic taste depending on the chemical used. However, the consumption of deworming drugs plays a very important role not only for the treatment of parasitism, but they are also included within the different measures of public health and control, to reduce the transmission of these parasitic diseases (OPS, 2011).

The side effects of the use of deworming drugs are very varied and depend on the type of anti-parasitic ingested as well as its composition and range from mild gastrointestinal symptoms to serious cardio-logical, renal, hematic and even neuropsychiatric. Among the most frequent conditions are nausea, vomiting, headache, dizziness, dizziness, anorexia, diarrhea, exanthema, insomnia, poly neuropathies, arrhythmias (ssa, 2007).

In conclusion, responsible and knowledgeable self-medication could be useful for the first level of health care; this if the population was duly informed of the indications, contraindications and risks of self-medication. However, the results of the present study show that people are not properly informed in this regard and a high percentage do not read the instructions specified in the medications they consume.

Young university students should be a focus of attention to influence responsible self-medication, under health promotion schemes. It is necessary to design care programs that contemplate the cultural diversity and characteristics of each population, thus achieving satisfactory results without cultural barriers and affecting the achievement of community health.

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