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Knowledge, Attitude and Practice of Pharmacists Regarding Dietary Supplements

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ABSTRACT

Background: Dietary supplement "DS" products are sold in the pharmacies very widely. However, there is no specific approval or definition to the legal and scientific usage of such products.

Objectives: We aim in this study to show the level of knowledge of pharmacists concerning the non-scientifically medically prescribed medication and formulas which is known as "Complementary and alternative medicines". Also, there is a variety of pharmacist's attitude concerning such treatment methods we need to evaluate and prove.

Material and methods: Questionnaire form to assess the knowledge and measure the attitude and practice of those pharmacists by direct meeting for the larger pharmacies and postal distribution for the lesser pharmacies.

Results: Based upon our study in hand, we affirm that there are several elements contributing in forming the general attitude and practice of pharmacists in treating with Dietary supplements.

Conclusion: knowledge of pharmacists of Dietary supplement (DS) products depends on both educational and environmental factors which form the knowledge base for them while dealing with customers and patients

Keywords: Pharmacists, Dietary supplements, DS, CAM, KAP.

INTRODUCTION

It is well known that pharmacists resemble the most important interface of the field of medicine. They are the executive partition of the treatment. The knowledge they gain and apply over the patients, whether as per the prescription assigned by doctors or based upon the request of the patients themselves, must by any mean be superior to the level of application. They are supposed to know precisely the goodness and badness of each application method for any kind of treatment. It is their job to convey certain results based upon the scientific approved method of the high boards and committees of medicine [(1)].

One of the main issues pharmacists face in a daily basis is the treatment with dietary supplements or what is called complementary and alternative medicine "CAM". They face ethical and scientific issues while dealing with such materials and substances to be considered as approved medicine in the first place [(1)].

Dietary supplement products are sold in the pharmacies very widely. However, there is no specific approval or definition to the legal and scientific usage of such products. And since there is no certain knowledge base for the treatment with DS and CAM products, the decision making of this process is taken for granted every time a patient asks for such products from the side of the pharmacist selling the product to them [(2)].

Since there is a huge consumption of DS and CAM products all over the globe, we intend to explain the definition of the term firstly to be able to gain the knowledge of how to deal with it, and to define whether this treatment is good or bad [(2)].

CAM products are a collection of systems specified for health care. Those systems depend on certain practices, products, and medication which are not approved by the higher committees of medicine [(2)].

It is calculated in 2007 that around forty percent of adults in US used CAM products and practices in a way or another. Also, we found that in Australia in 2003, there was a collection of fifty two percent of adults who had used DS, and that percentage is increased in 2007 to reach around seventy percent. The percentage which is viewed in Canada for the same statistics was approximately seventy one for the consumption of DS products. As for the developing countries, there is a huge growth of the consumption of DS products where the market of DS reach around sixty five percentage of consumption from their population [(3)]. Since those products show no significant side effects on the patients, their market is very wide and grows rapidly. And here comes the part where pharmacists are required to attain the needed knowledge to judge on those products. Patients and consumers are enchanted by the idea that pharmacists have all the answers about the usage of DS products, and they expect from them to recommend certain products and explain their mechanism of action.

That requires from the pharmacists to take decisive actions towards those products. So, pharmacists face many troubles distinguishing the knowledge conveyed to the consumers about DS

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products. And it urges them, because with the increase of DS products, there is a proportional increase of the number of patients asking pharmacists about the best recommendation of those products. The success of such products treatment is not followed in a guaranteed scientific method. It requires much studying of the product with its effect over each individual separately. And that's why we are following the knowledge, attitude, and practice - "KAP" analysis for pharmacists to study [4].

A lot of pharmacists, though, describe themselves when it comes to DS products and CAM practices as lacking the sufficient knowledge to make critical decision in such cases. This lack of knowledge they possess comes with lack of confidence and skill to assign and recommend certain products [4].

METHOD

The mainly used method in this study is KAP method as we indicated. The reason behind using this method is because it provides the most numerous information out of any studied system, and it is the most common to use in such studies and such purposes. KAP depends mainly on the definition of the knowledge gained by the studied samples, and measure the attitude and practices of those samples in a topic like DS products.

This method helps forming a final and a total image of data needed which affects the social, cultural and economic aspects of the societies concerned with this topic.

We targeted the community pharmacies, which include professional pharmacists and student of pharmacy taking internships in them. We aimed to use data analysis system after collecting a questionnaire form by direct meeting for the larger pharmacies and postal distribution for the lesser pharmacies. The questionnaire was a test of their knowledge, attitude, and practice of DS products and CAM in general.

We had divided the variables which differentiate them all in a number of categories. We considered gender -whether they were male or female pharmacists-, experience –whether they were entry-level, juniors, or seniors-.

As for assessing the knowledge of the pharmacists about DS products, they were required to answer multiple choice questionnaire involving the pharmacodynamics, safety measures, and pathological effects of those products over the - patients of several medical backgrounds.

Then to measure the attitude of the pharmacists concerning the treatment with DS products, they were asked multiple questions about the ethical and legal modulus of dealing with DS products in several situations.

To specify the practice of the pharmacists in dealing with DS products, they were asked to assess the performance of certain practices as whether they were to do it or not.

RESULTS

Knowledge

The study of knowledge in this topic is concerned with two opposing kinds: the actual knowledge and the perceived knowledge.

The perceived knowledge is based upon the thinking of the pharmacists about themselves as collecting incomplete information base of DS products. For the studies collected from the united states alone, we found that around half the percentage of the samples find themselves on a mean knowledge of DS products, and how to deal with them. While the other half described themselves as uneducated in that matter as much as they were educated in traditional medicine practices [5].

The same approximate results came from our samples. There were a very few portion of pharmacists who could consider themselves as knowledgeable in the DS products. While there were others who differentiated their knowledge degree of DS products as to be classified depending on the type of product or the class of the herbals used [5].

As for the actual knowledge of the pharmacists about the DS products, they were tested of the uses, effects, and cautions of the DS products and herbs. The test resulted in that less than half of the samples tested to pass the test, as for they were the ones who could be called in a level of good knowledge about DS products. While the other half or more were of very low information about the DS products, especially those who were of no prior education nor work experience related to the herbal and DS products [6].

They were able to answer the questions about the uses more than those about the effects and cautions to be taken in case of treating with DS. Another element participated in that low result is that there was an allowance for using an answer of "I don't know" in placement of questions with doubts for pharmacists. That was aggregated along with the false answers to report that negative results we are talking about here [6].

Attitude

We studied the attitude of the pharmacists concerning certain aspects about the DS products. Those aspect can be classified into five main groups [7].

The first aspect spoke of the general attitude of the pharmacists towards the DS products. There was a very wide variant contrast in opinions of the pharmacists concerning the acceptance of DS products in general. They were divided between a group finding that DS products are actually helpful and have many benefits to be exploited. While the other group either refused the usage of DS products in general or stayed neutral about their usage and benefits [7].

When studying the question of whether the usage of herbals and DS products, and treating patients with them, could affect the image of the pharmacy in front of its customers and competitors or not. The answers to that questions also varied. But most answers circulated around the refusal to shame a pharmacy for treating with DS products. While there were fewer opinions about treating with DS products as unethical and non-professional. While, of course, a middle portion stayed neutral about the issue. The studies included Canada, US, and our region. All studies showed around the same results with a factor of variance depends on the amount of knowledge in each country [7].

It was found between pharmacists that there is a division in opinions and beliefs trusting the DS products' usage safety. It was reported that around fifty percent of the pharmacists in the United States clear that DS products are not safe to use, and forty one percentage of pharmacists in the United States believe that DS products could lead to a placebo effect. While, twenty two percent disagreed on that statement, and thirty seven percent stayed neutral for the matter [8].

Another point researched was the effectiveness of the DS products in the treatment process. It was found that less than half of the samples agreed on the effectiveness of DS products in comparison to just less than quarter of the samples disagreeing to that. While the rest remained neutral of the matter [8].

Most of pharmacists were in favor of setting educational programs concerning the DS products and herbal treatment as a must to understand that field more and be able to give critical decisions [9].

It is more preferable for pharmacists to recommend DS products and herbal treatment based upon the regulation of an approved famous group or committee. It feels safer to take the decision with a relief if a regulatory group like FDA to affirm the usage of DS products. This was the choice number one for about eighty percent of pharmacists [10].

As for the quality of the information proposed for reading or taking as a reference in the field of DS products and herbal treatment, our pharmacists cleared that they feel that there is a poor quality information of the topic. Also, it is not only they need quantitative education about DS products, but they also require qualitative education of the matter and a variety of sources and references [11].

So in short, the five aspects we researched and tested showed mixed results among different attitudes towards DS products [11].

Practice

Here we study the results of three aspects concerning the DS products with pharmacists' practice. As we can watch that there is a low care for the documentation of the usage of DS products from the patients in the pharmacy. There was around eleven percent only of the cases of using DS and CAM who were recorded in the pharmacy logs and official documents in Texas in 1998. While the others showed severe ignorance to the documentation process [12].

Also, when we look into the recommendation frequency to the customers and patients of herbal treatment and DS products, we found that there is a higher percentage in recommending the herbal natural products more than the DS products. And in general there is a higher frequency of recommending DS products than committing to traditional medication only. Besides, we observed that in Canada and the united states in 1999, around ninety one percent of the pharmacists recommend using the DS products around ten times a month. Fewer percentages did not make any recommendation of any type of DS products to the customers, though [13].

We have researched into the results of pharmacists seeking more information to be updated in their minds about DS products. We found that there is a poor insistence to learn about DS. As in our samples they cleared that they only looked up the internet and references about DS over a less than three to four times a year [10].

DISCUSSION

The study showed the lack of information which is proportional directly with the increase and growth of the DS market across the whole globe. It is cleared that the customers and patients are not well satisfied with the information they receive from the pharmacists upon their visit to the pharmacy [14].

On the same line, we reported lack of confidence with the pharmacists themselves upon recommending the DS products or being inquired about which to recommend [12].

As per the data collected from our samples, the demographic divergence between males and females showed a difference in the Knowledge of DS

products as males were more familiar with DS products than females. Though, they were both on a similar level concerning their attitude towards the DS products and practices. That implies that gender is no factor in attitude and practice of DS [(15)].

The elder ages were more familiar with herbal treatment than the younger ages in pharmacists. That means we need to focus more on the educational level of pharmacists concerning herbal treatment and DS products [(16)].

CONCLUSION

We conclude that knowledge of pharmacists about DS products depends on both educational and environmental factors which form the knowledge base for them while dealing with customers and patients [(17)]. Attitude and practice, though, depend on other elements, but mainly, they depend on the educational level and interest in DS products [(18)].

RECOMMENDATION

We recommend to increase the relatable directories and the intensity of the scientific material conduction to pharmaceutical subjects in college, and provide wider investment in the field of herbal medication, DS, and CAM in general for better understanding how to use it safely. Also, testing approval of regulation like FDA would be the best to do [(19)].

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