

Community Pharmacists' Knowledge, Attitude and Practices towards Dispensing Antibiotics without Prescription (DAwP)

¹Fakhir Thamir Alotaibi, ¹Attiah Abdullrhman Khobrani, ¹Mesfer Safar Almalki,
²Hassan Abdullah Aljabri

¹Security Forces Hospital of Makkah, ²Alnahdi Medical Group

ABSTRACT

Background: As a result of the wide antibiotic abuse in many communities all over, bacterial resistance against different antibiotic formulas has aroused. It is an actual matter of importance because it touches up the most crucial principles of pharmacy and devoted work for medicine field in general.

Objectives: We have come to the aim of assessing the knowledge, attitude, and practice of pharmacists concerning dispensing antibiotics without prescription. We are discussing the ethical and legal elements contributing in the judgment of the final results and decision about the matter.

Material and methods: We are using the questionnaire test method to assess the knowledge and measure the attitude and practice of those pharmacists in marks and degrees.

Results: the pharmacists working in community pharmacies lack the knowledge of the legality of DAWD, though they know the greatly bad influence of it over the resistivity in bacteria and viruses. That of course goes along with the knowledge degree of the patients themselves

Conclusion: We have come to a conclusion that most of the pharmacists had no prior knowledge of the illegality of dispensing antibiotics without prescription "DAwP". And of course, we recommend to enhance the awareness and knowledge of them by raising educational training programs.

Keywords: Pharmacists, KAP, bacterial resistance, DAWP, knowledge, attitude, practice.

INTRODUCTION

It is now a worldwide problem of the century that there is a common bacterial resistance against antibiotics from different formulas. And the reasons behind that phenomena are taken into studying. It is a really dangerous matter, even beyond what we could possibly imagine ⁽¹⁾.

The dangers behind such phenomena may reach to the point where antibiotics have no good dealing with bacteria, which leads to longer diseases symptoms and higher rates of deterioration of the body accompanied with a great number of mortalities and losses. It all goes back to the excessive usage of antibiotics without following a proper prescription assigned by a professional doctor who had looked into the diagnosis of the case really well to prescribe such drug eventually. This participated in the adaption of bacteria to different kinds of antibiotics available in our drug stores and scientific centers in medicine ⁽²⁾.

It was, after all, meant to look into the factors affecting the intense usage of antibiotics without prescription from the side of the pharmacists or the doctors themselves. A various elements put into consideration, like the knowledge, attitude and practice of the pharmacists and patients towards those drugs ⁽³⁾.

Several studies were conducted and many campaigns were run to aware the people of the danger of over-using antibiotics without a proper prescription signed by an approved doctor of a certified professionalism. The studies then were conducted once more to identify and measure the knowledge, attitude, and practice of pharmacists and patients after being exposed to the campaign concerning DAWD. And that was in the purpose of defining the impact of those campaigns on the social, and medical level ⁽⁴⁾.

The world health organization "WHO" could be of proper help when they offered answers to the questions raised by the results and the findings of previous studies statistics for deteriorated cases because of over usage of antibiotics without prescription. The answers were interrelated with easing up the way for reaching the medical facilities concerned with proper prescription. Also, they stated that we need to cut off any non-essential usage of anti-bacteria and anti-microbes to decrease their activity and resistivity to antibiotics and drugs fighting them. Finally, they stated that we must follow a complete course of treatment when dealing with antibiotics in order to overcome bacteria at once without leaving any dosage behind, because that might lead bacteria to learn to adapt and resists that

effect of the antibiotics time after time of the discontinuous exposure to them ⁽⁵⁾.

The main goal of our study is to show the knowledge, attitude, and practice of both the doctors and the patients interrelated concerning the matter.

METHODS

We are here using the KAP study method. That method depends on identifying the knowledge, measuring the attitude, and the practice of the sample being tested. In this case, we are concerned with both the patients and pharmacists on equal terms. As we think that it is not only up to the pharmacists to recommend antibiotics, but it also refers back to the patients to follow proper rules and course of treatment without self-stopping it nor starting discontinuous dosage of the drugs.

The KAP study in that matter helps us with certain questionnaires we conduct for the sample being tested to produce and induce the most positive or negative honest results possible to collect from such great groups of samples.

In addition to that, the study includes our own personal experiments with the pharmacies in town and those contacted via postal mail. The questionnaire was posted to them by the mail, then their answers were collected afterwards by the same way.

The questionnaire itself was divided into three partitions, and there were two models of the questionnaire, one was designed for the pharmacists, and the other was designed for the patients dealing with antibiotics. The questionnaire in each model was divided into three main groups discussing different questions. The first group was discussing the knowledge element in the formula. So it held questions of right and wrong for both the pharmacists and patients to define and line the boundaries of knowledge inhabited by both of them concerning the usage of antibiotics without prescription. It questioned the legality of such a thing. Also, it offered many popular myths about these drugs to find out which of them is believed and which is not by both of the sample groups.

Then we establish another two divisions specified for measuring the attitude and practice of the pharmacists and patients when it comes to DAwD. The two models contained situational questions showing the likeliness of both of the sample groups to go for DAwD.

The answers were collected and the marks for the participants were taken as following: -

- For those in the knowledge partition, depending on the degree of awareness with the moral and legal parameters of the matter, they were separated to "Aware" whose Answers were more than 75% of the questions correct, and "Poor" whose answers were 50%-75% of the questions correct. Finally, those whose answers were less than 50% of the questions correct, were classified as "Unaware".

- For those in the attitude and practice partitions, depending on the degree of agreement to deal with DAwD they were labelled as follows: a. The ones who went in their answers with more than 75% of the questions in favor of using antibiotics and having wide tolerance with them were labelled "Pro-DAwD". b. Those who were hesitant and unsettled using DAwD ranging of answers between 50%-75% were labelled "Shy-DAwD". c. Those who were opposing to the idea of using antibiotics without prescription, or at least for second times with antibiotics were labelled "Con-DAwD".

RESULTS

Knowledge

To identify the knowledge of the pharmacists and patients, we had taken a sample of a variety of ages, genders, nationality, and years of experience –in the case of pharmacists- and medical background in the case of patients- to specify that matter with the most data out possible.

Surprisingly, we found that more than seventy five percent of the Pharmacists were unknowledgeable about the fact that such treatment with DAwD is certainly illegal and could lead to hazardous outcomes. That majority scored 50%-75%, and thus they were labelled as Poor ⁽⁶⁾.

When we looked into patients of the same category with their own model, we found that above ninety five percent of the audience tested were not on clear terms with the ethical and legal prohibition of DAwD. Their results varied beneath 50% of correct answers, and thus they were labelled as completely unaware ⁽⁷⁾.

Attitude

We found out that when pharmacists were asked whether they think that DAwD contributes badly in the health of the patients, the resistance of microbes to futuristic antibiotics, and whether they should stop dealing with DAwD or not. There was more than eighty five percent of them believing that they should stop dealing with DAwD. Their degrees on the situational questions gave them a score higher than 75%, which labels them as Con-DAwD ⁽⁸⁾.

The situation was different for patients, as the whole range of degrees they got was under 50% in the questions answered to be labelled as pro-DAwD. That means that the majority of them thinks that there is no problem dealing with DAwD, and that they ignore or refuse to admit the side effects on the evolutionary level of bacteria resisting antibiotics ⁽⁹⁾.

Practice

Concerning the pharmacists, it was found that most of them were open to guide the patients through consulting their doctors first before ordering the antibiotics. Also, it was noticed from the answers that most of the pharmacists, if not all, tried in a way or another to warn the patients about allergies against the common antibiotics before dispensing them. They, as well, in most cases, advise the patients to follow the course of treatment with antibiotics upon taken completely without any discontinuity in the middle, and they make it clear that it is an important step in the process of healing ⁽¹⁰⁾.

Concerning the patients' results, they showed different manner of action. Patients usually went Pro-DAwD as they in general didn't consult their doctors first, because they would do so only when it is critical or dangerous, but not in the regular diseases. They also practiced DAwD mostly with diseases like diarrhea, fever and FLU. They mostly depend on the oral dosage of antibiotic than other types of antibiotic dosage. Around forty percent of them reasoned not going to a doctor for consultancy about whether to take up antibiotics or not by the high expenses of consulting a doctor in favor of trusting the knowledge of the pharmacists ⁽¹¹⁾.

DISCUSSION

As for the results shown above for the pharmacists and patients in every aspect of comparison, we observed that the knowledge of the patients is taken from the surrounding myths and customs. While that of the pharmacists, it depends on the nationality and experience more than in the gender parameter ⁽¹²⁾.

As for the results came in the element of attitude, it appears that the pharmacists have more positive attitude towards avoiding DAwD as much as possible. While on the other hand we found that the patients have more tendency to seek DAwD more often ⁽¹³⁾.

As for the results came in the element of practice, it appears that the gender of pharmacists and patients forms no significant contribution to the influence of using DAwD or finishing the course of treatment with

antibiotics. It only refers back to the experience gained by the pharmacists and the level of trust between the patients and the pharmacists themselves upon giving the advice of taking up the whole course of antibiotic treatment without any discontinuity intervals. Or even when it comes to consulting a doctor before taking up the drug ⁽¹⁴⁾.

And as a matter of fact, we have found that the increasing usage of DAwD contributes in training the bacteria and viruses to act in an evolutionary way by resisting the drug's chemical components which eliminate them in the first place. This means that microbiological beings learn to adapt and overcome the drug time after time from the continuous usage of unnecessary doses or interrupted courses of treatment with antibiotics ⁽¹⁵⁾.

CONCLUSION

We conclude that the pharmacists working in community pharmacies lack the knowledge of the legality of DAwD, though they know the greatly bad influence of it over the resistivity in bacteria and viruses. That of course goes along with the knowledge degree of the patients themselves ⁽¹⁶⁾.

Also, pharmacists contribute with less attitude and practice of DAwD towards the patients rather than that of the patients towards themselves. Though pharmacists don't follow the WHO policy 100% in DAwD, yet, they provide it without prescription with hesitance and they assure that they inform the patients with all the data needed to avoid mortalities and complexities ⁽¹⁷⁾.

RECOMMENDATION

We recommend that there must be certain types of training for the pharmacists concerning the legal practices of drugs. On the other hand, for the patients, we must run multiple educational campaigns to report the danger of DAwD and explain it to them in the simplest way possible to help them co-operate with us stopping the crisis of bacterial resistance to antibiotics from occurring ⁽¹⁸⁾.

REFERENCES

- 1.WHO (2007):** The World Health Organization report 2007, A safer future: global public health security in the 21st century. Available at: <http://www.who.int/whr/2007>.
- 2.Boucher HW, Talbot GH, Bradley JS, Edwards JE, Gilbert D, Rice LB et al. (2009):** Bad bugs, no drugs: no ESKAPE! An update from the Infectious Diseases Society of America. *Clin Infect Dis.*, 48:1-12.

3. Vaananen MH, Pietila K and Airaksinen M (2006): Self-medication with antibiotics--does it really happen in Europe? *Health Policy*, 77:166-171.
4. Goossens H, Ferech M, Vander Stichele R and Elseviers M (2005): Outpatient antibiotic use in Europe and association with resistance: a cross-national database study. *Lancet*, 365:579-587.
5. Wachter DA, Joshi MP and Rimal B (1999): Antibiotic dispensing by drug retailers in Kathmandu, Nepal. *Trop Med Int Health*, 4:782-788.
6. Zhang R, Eggleston K, Rotimi V and Zeckhauser RJ (2006): Antibiotic resistance as a global threat: evidence from China, Kuwait and the United States. *Globalization and health*, 2:6.
7. Aly M and Balkhy HH (2012): The prevalence of antimicrobial resistance in clinical isolates from Gulf Corporation Council countries. *Antimicrobial resistance and infection control*, 1:26.
8. Roque F, Soares S, Breitenfeld L, Lopez-Duran A, Figueiras A and Herdeiro MT (2013): Attitudes of community pharmacists to antibiotic dispensing and microbial resistance: a qualitative study in Portugal. *International journal of clinical pharmacy*, 35:417-424.
9. You JH, Yau B, Choi KC, Chau CT, Huang QR and Lee SS (2008): Public knowledge, attitudes and behavior on antibiotic use: a telephone survey in Hong Kong. *Infection*, 36:153-157.
10. Davey P, Pagliari C and Hayes A (2002): The patient's role in the spread and control of bacterial resistance to antibiotics. *Clin Microbiol Infect.*, 2:43-68.
11. Barah F and Goncalves V (2010): Antibiotic use and knowledge in the community in Kalamoon, Syrian Arab Republic: a cross-sectional study. *East Mediterr Health J.*, 16:516-521.
12. Plachouras D, Kavatha D, Antoniadou A, Giannitsioti E, Poulakou G, Kanellakopoulou K *et al.* (2010): Dispensing of antibiotics without prescription in Greece, 2008: another link in the antibiotic resistance chain. *Euro Surveill.*, 15:1-7.
13. Shehadeh M, Suaifan G, Darwish RM, Wazaify M, Zaru L and Alja'fari S (2012): Knowledge, attitudes and behavior regarding antibiotics use and misuse among adults in the community of Jordan. *A pilot study. Saudi pharmaceutical journal*, 20:125-133.
14. Abuirmeileh A, Samara S, Alkhodari A, Bahnassi A, Talhouni A and Hayallah AM (2014): Antibiotic dispensing without prescription in Jordanian community pharmacies: a pharmacist's perspective. *Bulletin of Pharmaceutical Sciences*, 37:51-63.
15. Butler CC, Rollnick S, Pill R, Maggs-Rapport F and Stott N (1998): Understanding the culture of prescribing: qualitative study of general practitioners' and patients' perceptions of antibiotics for sore throats. *Bmj.*, 317:637-642.
16. Park S, Soumerai SB, Adams AS, Finkelstein JA, Jang S and Ross-Degnan D (2005): Antibiotic use following a Korean national policy to prohibit medication dispensing by physicians. *Health policy and planning*, 20:302-309.
17. Qureshi H, Gessner BD, Leboulleux D, Hasan H, Alam SE and Moulton LH (2000): The incidence of vaccine preventable influenza-like illness and medication use among Pakistani pilgrims to the Haj in Saudi Arabia. *Vaccine*, 18:2956-2962.
18. Belongia EA, Naimi TS, Gale CM and Besser RE (2002): Antibiotic use and upper respiratory infections: a survey of knowledge, attitudes, and experience in Wisconsin and Minnesota. *Preventive medicine*, 34:346-352.