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ISSN 0946-1965

DOI 10.5414/CP201814
e-pub: ■■month, ■■day, ■■year

Patterns and attitudes of self-medication practices and possible role of community pharmacists in Palestine

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Key words

self medication – over the counter (OTC) – pharmacists' role – Palestine

Abstract. Purpose: This research aims to describe the extent of self-medication, assess possible factors associated with it, identify patients' reasons for self-medication and their attitudes towards the role of pharmacists in self-care so that future interventions can be documented and planned.

Methods: A cross-sectional study using a questionnaire was conducted. Questionnaires were distributed randomly to 565 persons from all over the West Bank. The questionnaire covered self-medication purchases and experience with minor illnesses.

Results: From 565 people approached, 400 (70.8%) agreed to participate in the study. Self-medication was reported by 87.0% (n = 348) of cases interviewed, among them 224 (56.0%) used at least one medication without consulting a doctor in the previous month. Analgesics were the most common class used in self-medication by 317 (79.2%) respondents, followed by flu medications (233, 45.3%), and antibiotics (132, 33.0%). The majority reported that they selected medications based on self-decision and previous use (233, 58.2%). Advice received from pharmacists was another important factor in 216 (54.0%). The most common reasons for self-medication were: their ailments being minor (341, 85.2%) and they had this medical problem before 198 (49.5%). Among 397 respondents, 335 (84.4%) either strongly agreed or agreed that the community pharmacists play an important role in providing advice – when needed – for self-medication.

Conclusions: Self-medication practices have been common among people in Palestine. There has been a high rate of using antibiotics without prescription, which requires suitable regulations and interventions to solve this problem. The results have shown a positive attitude towards the role of pharmacists in self-care. Community pharmacists have the potential to make a huge impact in ensuring that medicines are used appropriately.

Introduction

In recent years, the idea of self-care has been strongly promoted in many countries. People are being encouraged to monitor their own illnesses, prevent diseases and improve or maintain their health [1]. Self-medication is a common practice worldwide [1, 2, 3, 4, 5, 6, 7]. Several benefits have been linked to appropriate self-medication, among them: increased access to medication and relief for the patient, the active role of the patient in his or her own health care, better use of physicians and pharmacists' skills and reduced cost of treatment for minor health conditions. However, potential risks of inappropriate self-medication practices include: incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse [8, 9].

The Palestinian pharmacy practice law requires that prescription medications be sold on a prescription only basis. These laws are not strictly enforced in community pharmacies [10]. In Palestine, like many other developing countries [4], having a valid prescription is not enforced for receiving prescription-only drugs. With the exception of narcotics and major tranquilizers, almost any drug available in the market can be purchased as over the counter medication without a prescription.

According to the Palestinian Ministry of Health (MOH) statistics in 2010, there are 2,908 registered pharmacists in the West Bank; of them, 172 work in the MOH, a mi-

Received
July 23, 2012;
accepted
January 2, 2013

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nority work in pharmaceutical companies or as medical representatives of medical products. The majority of pharmacists work in community pharmacies. There are 838 community pharmacies in the West Bank [11, 12]. These pharmacists may play an important role in organizing and optimizing self-medication and the use of over the counter (OTC) drugs. Drug utilization studies are very limited in Palestine. To help improve healthcare, it is important to have baseline data regarding self-medication so that future interventions can be planned and regulations implemented. The aims of this study are to obtain baseline data on the extent of self-medication among Palestinian population; assess the association between a number of variables and self-medication, identify patients' reasons for self-medication and their attitudes toward the role of pharmacists in self-care.

Method

A community-based cross-sectional study was conducted between January and May 2010. Since there was no available literature showing the prevalence of self-medication among Palestinian community in general, a 50% expected prevalence of self-medication was used to determine the minimum sample size for this study using the following formula [13]:

$$n = Z^2 p (1 - p) / c^2$$

Where n = minimum sample size, Z = 1.96 at 95% confidence interval obtained from standard statistical table of normal distribution, p = estimated prevalence of self-medication (50% or 0.5), and c = confidence interval expressed as decimal (0.05), n was calculated to be 384, so 400 questionnaires were collected.

Consumers were interviewed using pre-piloted questionnaire prepared from a review of similar studies [1, 4, 14], the purpose of the study was explained to them and they were asked to consent to participate in the study. The data was then collected by trained fourth year pharmacy students. The questionnaire included questions to ask about: (1) demographic data (e.g., age, gender, education level, health insurance status, and monthly income), (2) information regarding medica-

Table 1. Demographic characteristics of the respondents.

| Characteristic | Number (%) |
|---|------------|
| Gender (n = 400) | |
| Male | 172 (43.0) |
| Female | 228 (57.0) |
| Education (n = 399) | |
| Postgraduate | 18 (4.5) |
| College or university graduate | 282 (70.7) |
| High school | 76 (19.0) |
| Primary and middle school | 20 (5.0) |
| Illiterate | 3 (0.8) |
| Area of residence (n = 398) | |
| City | 162 (40.7) |
| Village | 216 (54.3) |
| Camp | 20 (5.0) |
| Household monthly income (n = 394) | |
| < 200 JD | 40 (10.2) |
| 200 – 600 JD | 207 (52.5) |
| 600 – 1,000 JD | 98 (24.9) |
| > 1,000 JD | 49 (12.4) |
| Health insurance (n = 400) | |
| Yes | 278 (69.5) |
| No | 122 (30.5) |
| Current health status (n = 400) | |
| Excellent | 144 (36.0) |
| Very good | 167 (41.8) |
| Good | 67 (16.8) |
| Fair | 19 (4.8) |
| Poor | 3 (0.8) |
| Chronic diseases (n = 397) | |
| Yes | 61 (15.4) |
| No | 336 (84.6) |

tions used for self-treatment by participants, (3) reasons for self-medication, (4) factors that influenced the choice of self-medication drugs, (5) attitudes toward consulting pharmacists and accepting their advice.

All data was entered and analyzed using the SPSS software (version 16; SPSS, Inc, Chicago, IL, USA). χ^2 - and Fisher exact-tests were used to test any significant difference between categorical variables. All p-values were two-sided and $p < 0.05$ was considered statistically significant.

Results

Demographic data

From 565 people approached, 400 (70.8%) agreed to participate in the study. Females accounted for 228 (57.0%) of the total sample. The average age was 34.4 (\pm 12)

Table 2. Medication classes reported in self-medication.

| Medication class | Frequency | % |
|-----------------------------|-----------|------|
| Analgesics | 317 | 79.2 |
| Flue medications | 233 | 58.2 |
| Antibiotics | 132 | 33 |
| Herbal remedies | 129 | 32.2 |
| Topical treatment or creams | 120 | 30 |
| Antitussives | 116 | 29 |
| Antacids | 116 | 29 |
| Vitamins | 69 | 17.2 |
| Spasmolytics | 59 | 14.8 |
| Allergy medications | 52 | 13 |
| Diarrhea medications | 41 | 10.2 |
| Laxatives | 37 | 9.2 |
| Sleep aids | 19 | 4.8 |
| Others | 11 | 2.8 |

years (from 18 to 76 years). Around 2/3 of the participants 278 (69.5%) had health insurance and 282 (70.7%) had a university degree. Table 1 summarizes respondents' demographic characteristics.

Medication usage and therapeutic classes used

Self-medication was reported by 87.0% (n = 348) of interviewed participants. Of those, 224 (56.0%) reported having done so at least once in the past month. Analgesics were the most common class used in self-medication by 317 (79.2%) respondents, followed by flu medications (233, 45.3%), antibiotics (132, 33.0%), and herbal remedies 129 (32.2%) (Table 2). No significant associations were found between any of the sociodemographic factors and self-medication use (all p-values > 0.05). However, the use of analgesics was significantly higher among females compared to males (193 (60.1%) vs. 124 (39.1%)) respectively (p-value = 0.002). The use of antacids was significantly higher in patients with chronic diseases, 26 out of 62 (41.9%) patients with chronic diseases used antacids as OTC compared to 90 from 338 (26.6%) persons without chronic diseases (p-value = 0.015). Antacids use was higher in patients who evaluated their health status as poor or fair (54.5%) compared to those who evaluated it as good or better (27.5%) (p-value = 0.007).

Table 3. Reasons reported for self-medication (n = 400).

| Reason | Number (%) |
|---------------------------------|------------|
| Minor ailment | 341 (85.2) |
| Had this medical problem before | 198 (49.5) |
| Save money | 58 (14.5) |
| Save time | 55 (13.8) |
| No trust in medical doctors | 18 (4.5) |
| Fear of more serious disorder | 8 (2.0) |

Reasons for self-medication

The study identified participants' potential reasons to self-medicate (Table 3), which were mainly: their ailments being minor (341, 85.2%), they had this medical problem before 198 (49.5%), saving physicians' visiting cost 58 (14.5%), saving the time they had to wait before they can be seen by a physician 55 (13.8%), having no-trust in medical doctors 18 (4.5%), and being afraid to discover a more serious disorder 8 (2.0%). The numbers do not add up to 100% as patients might have had more than one reason at a time.

Factors that influenced the choice of self-medication drugs

When participants were asked about the factors that most commonly influenced their choice of non-prescription drugs, the majority reported that they did so based on self-decision, as they have used these medications before and found them successful in relieving symptoms (233, 58.2%). Advice received from community pharmacists was another important factor in 216 (54.0%) participants. Some was based on advice from family and friends (45, 11.2%). A small group practiced self-medication based on media advice (7, 1.8%) (they were allowed to choose more than one factor).

Attitudes towards the role of community pharmacists

When the participants were asked if they consult the community pharmacists and ask for their advice when they buy medications for self-treatment, 67 out of the 348 (19.3%) said that they always do, 102 (29.3%) said

that they do most of the time. The primary reason for visiting a pharmacy was to obtain prescription medicines (225, 57.1%), 76 (19.3%) of interviewers reported visiting a pharmacy primarily to purchase OTC medicines, while 93 (23.6%) visited to purchase items other than medicines. A very high proportion of respondents (365, 91.9%) claimed they always read the expiry date before using medications. A good proportion of respondents (59.9%) claimed they always read the package inserts information and 21.4% said that they do this most of the time. A higher percentage of female than male respondents (71.7% vs. 44.4% respectively, $p < 0.005$) claimed to always read package information during the purchase stage. Participants were asked if they believe that the community pharmacists play an important role in providing advice, when needed, for self-medication. Among 397 respondents, 91 (22.9%) strongly agreed and 244 (61.5%) agreed with this.

Discussion

Self-medication was reported by 87.0% ($n = 348$) of interviewed participants. Current study revealed that self-medication was a common practice among different age groups, gender, financial situations, and education levels. Other studies reported similar findings. The prevalence here is lower than a study among a group of Palestinian university students where 98% of them reported self-medication practices [14], but still higher than other studies as in Jordan (42.5%) [4], Chile (75.0%) [15], and Hong Kong (32.9%) [16]. In a previous study that was conducted at one community pharmacy in our country, the percentage of patients who were seeking self-medication was approximately 60% [10]. Several studies have revealed the presence of different factors that influence self-medication, including patient's satisfaction with the healthcare provider, cost of drugs, educational level, socio-economic factors, age and gender [1, 4, 17, 18, 19]. In the current study, this was not found to be the case.

Analgesics were the most commonly used medications for self-treatment by 317 (79.2%) respondents, this is similar to many other studies worldwide [1, 10, 15, 16, 20].

Use of antibiotics was very high among participants (33.0%). This result confirms other studies in our country where 19.0% of patients bought antibiotics without prescription in one study [10], and 19.9% of university students reported use of antibiotics as self-medications in another [14]. Antimicrobial drug self-medication prevalence varies widely among different regions. The prevalence has been reported as 13.0 – 74.6% in population-based studies [21]. In a study from Jordan, 61.5% of respondents thought that antibiotics are OTC drugs [20], in a study from Republic of Srpska, non-prescription antibiotics were dispensed in 76 (58%) pharmacies despite being illegal [22]. This problem requires suitable regulations and interventions to limit this irrational use of antibiotics. The use of herbal products was also high (129, 32.2%), this is close to results from a study among university students in our country where 33.9% of the respondents reported using herbal remedies in self therapy [23]. This field requires further investigation and regulation to find the evidence based safety and efficacy of herbs used, and to improve patients' awareness with possible side effects or drug interactions with herbs. People in our communities like to use herbal products because they believe they are totally safe.

A high percentage of the respondents (341, 85.2%) justified their self-treatment practice by suffering from minor ailment that required no medical intervention. Other reasons included having this medical problem before 198 (49.5%), saving physicians' visiting cost 58 (14.5%), saving the time they had to wait before they can be seen by a physician 55 (13.8%). These reasons are also similar to other studies [4, 10]. It is worth mentioning, that self-treatment of minor ailments gives patients the opportunity to take responsibility and build confidence to manage their own health [4]. If a well-informed individual or family manages to solve or relieve a variety of troubles or minor health problems by themselves, they will avoid having to travel, wait, or other inconveniences that the health care delivery system entails, the demands of which are usually excessive. Therefore, responsible self-medication is a great relief for the health delivery care system because, if there is no need to see a doctor for every ailment we may have, doctors may devote more

time to the investigation, treatment, and prevention of serious pathologies that need a professional health care provider [15].

Participants' choice of non prescription medication was based mainly on their previous experiences with similar symptoms or similar diseases and advice received from community pharmacists. As it can be noticed, a high percentage of participants 216 (54.0%) reported on advice received from community pharmacists in their choice. When the participants were asked if they consult the community pharmacists and ask for their advice when they buy medications for self-treatment, 169 (48.6%) out of 348 who answered this question said that they either always or most of the time do this. And when they were asked if they believe that the community pharmacists play an important role in providing advice – when needed – for self-medication, among 397 respondents, 335 (84.4%) either strongly agreed or agreed with this. All these results show a positive attitude towards the role of pharmacists in self-care. This is promising in terms of the future implementation of pharmaceutical care in community pharmacy settings in our country. This puts the pharmacies in a situation to play a major and important role in public and community health issues. They can guide consumers and give them the most appropriate OTC medications for their conditions or ask them to consult a doctor if their condition requires this. In Palestine, many patients seek medical advice directly from the community pharmacies because they are easily accessible, faster and less expensive than the doctors' clinics. This is even more obvious in village areas where medical services are less developed [10].

A very high proportion of respondents (365, 91.9%) claimed they always read the expiry date before using medications and a good proportion of respondents (81.3%) claimed they either always or most of the time read the package insert information. These results show a good level of awareness towards the safety of medications, but it is apparent that there is a room for improvement. Community pharmacists can play a more active role in health promotion by giving the patients suitable advice. In the past few years, efforts worldwide are increasingly

extending the role of the pharmacists beyond the dispensary and into a more active role of dealing with patients' drug-related problems [20]. It is necessary for the government to enhance the involvement of pharmacists in primary care and promote the roles of pharmacists through patient education, so that people can have more opportunities to communicate and contact with pharmacists.

The most important limitation in this study is that the answers reported by the respondents cannot be validated and recall bias is possible, but this cannot be avoided in survey studies. Also, the sample might not be representative of the community, for example, around 70% of respondents had a university degree and this is not the case in the community. However, the results can still give us base-line data about the situation which meets the aims of this study.

Conclusion

Self-medication practices have been common among people in Palestine. There has been a high rate of using antibiotics without prescription, which requires suitable regulations and interventions to solve this problem. The results have shown a positive attitude towards the role of pharmacists in self-care. Community pharmacists have the potential to make a huge impact in ensuring medicines are used appropriately. The findings of this study may form the basis for future interventional plans to maximize benefits and minimize risks. Educational programs directed towards the public can increase rational drug selection. Additionally, the health authorities have to implement their regulations to prohibit the selling of POM without prescription. Also, continuous education programs that target pharmacists can improve their role in helping people reach appropriate decisions related to their health.

Acknowledgment

The author would like to thank the fourth and fifth year pharmacy students at An-Najah National University for their help in data collection.

Conflict of interest

None.

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