ORIGINAL ARTICLE

Frequency of using non-prescribed medication in Majmaah city, Saudi Arabia — A cross sectional study

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Abstract

Objective: To determine the frequency of using non-prescribed medication in a Saudi Arabian city.

Methods: The cross-sectional study was conducted in Majmaah city, Saudi Arabia, from January to May 2014, and comprised adults of either gender. For data collection, a questionnaire was designed and its reliability was checked by Cronbach Alpha. SPSS 20 was used for statistical analysis.

Results: Of the 390 respondents 276(70.8%) were males, while 114(29.2%) were females. The overall mean age was 29.90±11.56 years (range: 18-83 years). Of the total, 363(93.1%) were using non-prescribed medication; and 148(37.9%) said they were using the drugs as they had experienced similar symptoms before and they knew the treatment. Public pharmacies were the main source for obtaining non-prescribed medication for 163(41.8%) subjects. Gender and use of non-prescribed medication was significantly associated ($p<0.05$).

Conclusion: The frequency of using non-prescribed medication in Majmaah city was high. Pain-killers, antibiotics and antipyretics were the most used non-prescribed medications. Male respondents used non-prescribed medication more than the females.

Keywords: Non-prescribed medication, Saudi population, Self-medication, Majmaah community. (JPMA 65: 825; 2015)

Introduction

Self-medication is practised worldwide.[1] Due to the growing negative impact of such practice, the World Health Organisation (WHO) has been giving this issue due attention.[2] A study[3] defined self-medication as 'the product for the treatment of a disease or for disease prevention or for promotion of health without a professional prescription". Relatively, a high proportion of drugs are being dispensed without professional medical prescription that needs follow-up. The use of non-prescribed medication can be considered the most common form of taking care of self-health. The use of non-prescribed medication can take place through the consumption of industrialised medication.[4,5] Re-submitting old prescriptions to purchase medicines.[6] sharing medicines with relatives or members of one's social circle,[7] using leftover medicines stored at home[8] or failing to comply with the professional prescription either by prolonging it or interrupting it too early or decreasing or increasing the originally prescribed dosage.[7,9]

Economic, political and cultural factors have stimulated a constant increase in self-medication worldwide, turning this practice into a major public health problem. Although there is currently a huge amount of medicines available in the market, but this does not equate with an improvement in quality.[10] It has been noticed that the uses of non-prescribed medication is high among Saudi population. Because it could be easily obtained without a medical prescription or an evidence-based indication.[11] The uses of non-prescribed medication refers to patients who use non-prescription medicines to treat certain self-diagnosed disorder or symptoms without consulting a medical practitioner and without any medical supervision.[12-14]

The prevalent trend of using of non-prescribed medication is associated with several factors, particularly lack of access to healthcare, availability of many medication as over-the-counter medicines, poor regulatory practices and medical care in hospitals with long delays.[15-17] The use of non-prescribed medication among the population appears to be more driven by economic factors, meaning that the person who was able to pay for the cost of medication, and, therefore, practised self-medication which they considered easier.[18]

Potential adverse events of using non-prescribed medication are common. Pharmacists dispensing non-prescription medication have no knowledge of patients' allergies.[19,20] Duration and dosing of non-prescribed medication use might be affected without a prescription. An additional safety concern might be the substandard quality of medication available without prescription.

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Expired drugs or those that, as a result of degradation, have decreased bioavailability might both predispose a patient to treatment failure and promote adverse effect.[21,22]

Educating the public about the worldwide existing problems of antibiotic resistance (in case of using antibiotics), drug adverse effects, and unnecessary cost associated with medicines sales without medical prescription is urgently needed.[11] Therefore, the current study was planned to determine the frequency of using non-prescribed medication in a Saudi Arabian city, and to identify the relationship of using non-prescribed medication with socioeconomic status and educational level. Also, the most used non-prescribed medication and the predisposing factor for such behaviour were to be assessed. Furthermore, the side-effects after using non-prescribed medication were also to be noted.

Subjects and Methods

The cross-sectional study was conducted from January to May 2014, and comprised adults of either gender. The study was conducted in Majmaah city, which is a governorate in Riyadh province, Saudi Arabia, with a population of around 45,000. After being approved by the Ethical Committee of Majmaah University, subjects were registered who were briefed about the purpose of the study. All information was kept strictly confidential. Data was collected by direct investigation method using convenience sampling technique. The sample size was calculated using the one-sample proportion formula.[23] The following information was used in calculating the sample size: p_1=0.59, p_2=0.50, p_2-p_1=0.09, $Z_{(1-\beta)}$=0.90 and $Z_{(1-\alpha/2)}$=1.96. The power of study (90%) was calculated using Power Analysis & Sample Size (PASS) software.

A questionnaire was designed whose reliability was tested by Cronbach Alpha (0.77). At the time of study, the conversion factor for Saudi Riyal (SAR) 1.00 was equivalent to $0.27, and the variable monthly income was adjusted accordingly. Data was analyzed using SPSS 20. Mean±standard deviation (SD) values were worked out for quantitative variables like age, while frequencies and percentages were calculated for qualitative variables. Pearson chi-square test was applied to observe associations between qualitative variables like gender and marital status. P<0.05 was considered statistically significant. Participation consent from the subjects was taken (verbally).

Results

Of the 390 respondents 276(70.8%) were males, while 114(29.2%) were females. The overall mean age was 29.90±11.56 years (range: 18-83 years). Besides, 213(54.6%) respondents were unmarried, 165(42.3%) were married, 7(1.8%) were divorced, and 5(1.3%) were widowed.

Further, 269(69%), had higher education degree, 95(24.4%) had secondary school degree, 12(3.0%) were intermediate, and 7(1.8%) were either illiterate of had elementary degree. In terms of occupation, 178(45.6%), students, 171(43.8%) belonged to working class, and 24(6.2%) were unemployed. As for monthly income, 193(50%) were earning less than SAR 3,000, while 17(4.4%) were earning over SAR 15,000 per month (Table-1).

Of the total, 363(93.1%) were using non-prescribed medication. Overall, 165(42.2%) respondents were not aware about the side effects of medications they were taking; 34(8.7%) experienced side effects; 195(50%) read the instructions that came with medication; 333(85%) knew that medications have side effects; 314(80.5%) knew that medication should be prescribed by physicians; 311(79.8%) didn't have chronic illness; and 79(20.2%) had chronic illness (Table-2).

In sub-division of chronic illness, (32(8.2%) had diabetes; 22(5.7%) were hypertensive; 9(2.3%) thyroid disorders; 9(2.3%) hyperlipidaemia; 3(0.7%), bone disorder and 2(0.5%) had cardiovascular diseases. For 152(39%) subjects, the source of obtaining non-prescribed medication was public pharmacies.

Further, 93(23.8%) respondents were using them 5-10 times; 177(45.4%) were using them for1-3 days; 83(21.3%) were using antibiotic + pain-killer + antipyretic; only 1(0.3%) was using antihypertensive.

Table-1: Socio-demographic characteristics.

Variable	n (%)	Variable	n (%)
Monthly Income		**Education**	
<3000 SAR	193 (49.5)	Elementary	07 (1.8)
3000 – 6000 SAR	57 (14.6)	Intermediate	12 (3.0)
6001 – 9000SAR	45 (11.5)	Secondary	95 (24.4)
9001 – 12000 SAR	42 (10.8)	Higher degree	269 (69.0)
12001 – 15000SAR	36 (9.2)	Illiterate	07 (1.8)
>15000 SAR	17 (4.4)		
Gender		**Occupation**	
Male	276 (70.8)	Working	171 (43.8)
Female	114 (29.2)	Retired	17 (4.4)
		Un-employed	24 (6.2)
		Student	178 (45.6)
Marital Status			
Single	213 (54.6)		
Married	165 (42.3)		
Divorced	07 (1.8)		
Widow	05 (1.3)		

Table-2: Parameters related to Non-prescribed Medication.

	n (%)		n (%)
Overall frequency of various study parameters?		**Sources of Obtaining Non-prescribed Medication**	
Use of non-prescribed medication	363 (93.1)		
Awareness of medication side effects	165 (42.2)	Home stock	36 (9.30)
Previous experience of side effects	34 (8.70)	Family members	71 (18.2)
Reading instruction about medication use	195 (50.0)	Previous medical prescription	49 (12.6)
Knowledge about side effects	333 (85.4)	Personal experience	52 (13.3)
Medication should be prescribed by physicians	314 (80.5)	Friend	19 (4.8)
		Media	11 (2.8)
		Public pharmacy	152 (39.0)
Type of Chronic illness		**Duration of using non-prescribed medication:**	
Thyroid Disorder	09 (2.3)	1 – 3 days	177 (45.4)
Diabetes	32 (8.2)	3 – 6 days	173 (44.4)
Hyperlipidaemia	03 (0.7)	6 – 9 days	29 (7.40)
Hypertension	22 (5.7)	> 9 days	11 (2.80)
Bone disorder	02 (0.5)		
Cardiovascular diseases	02 (0.5)		
Other illnesses	09 (2.3)		
None	311 (79.8)		
Frequency of using non-prescribed medication:		**Dosage of Medication**	
		Pharmacist	104 (26.7)
< 5	71 (18.2)	Previous doses	77 (19.8)
5 – 10	93 (23.8)	According to pain	31 (7.90)
10 - 15	88 (22.6)	According to drug instruction	117 (30.0)
15 - 20	64 (16.4)	Severity	29 (7.40)
>20	74 (19.0)	Randomly	32 (8.20)
Reading Medication Instructions			
Side Effects	56 (14.3)		
Contraindication	08 (2.00)		
Doses	12 (3.10)		
All	88 (22.5)		
Indication	31 (8.10)		
Never read medical instructions	195 (50.0)		

When asked about the reason for using non-prescribed medications, 141(36.2%) said they had "similar symptoms before and they know the treatment". For 71(18.2%) "there is no need for medical consultation". Besides, 67(17.2%) were using non-prescribed medication to treat fever+ pain + headache; 58(14.9%) said they were treating fever + headache.

Further, 195(50%) had never read the instructions that came with medication; 56(14.3%) read only the side effects; 31(8.1%) read indications; 8(2%) contradictions; and 117(30%) determined the medication dose according to the drug instructions.

Of the 363 who had used non-prescribed medication, 264(67.7%) were male and 99(25.4%) were female (p=0.002).

Discussion

The study aimed at determining the frequency of using non-prescribed medication in Majmaah city, to identify the relationship of using non-prescribed medication with socioeconomic status and educational level, to identify the most used non-prescribed medication, to identify the predisposing factor for such behaviour and to identify the side effects. The frequency of using non-prescribed medication among the study population was high (93.1%). More than three quarters of the population used non-prescribed medication. The predisposing factor highlighted was the response, "I had similar symptoms before and I know the treatment" (37.9%). Pharmacists were the main source for obtaining non-prescribed medications (41.8%). Antibiotics, pain-killers and antipyretics were the most used mediations without prescription to treat mainly fever, pain and headache which were the common complaints for using non-prescribed medications. Gender and use of non-prescribed medication was significantly associated. There was no association between usage of non-prescribed medication and marital status, education level,

occupation and monthly income (p>0.05) respectively. According to one study,[11] use of non-prescribed medication is high among Saudi population. Our results are in line with this finding. Another study reported that the use of non-prescribed medication appear to be more driven by economic factors meaning that those who were unable to pay for the cost of hospital care were the ones using non-prescribed medications. However, our study didn't find an association between the two factors. Other studies[15-17] showed easy availability of over-the-counter medications. Our results supported this view.

Potential adverse events were reported to be common in other studies.[19,20] However, our study reports no potential adverse events. But a unique result shows that more than half of our respondents (57.6%) were not aware of possible adverse events.

The study had its focus on Majmaah city which has a small population compared to big cities like Riyadh, Jeddah etc. The sample size is a limitation of our study and the subject needs to be further studied on a large sample size.

We recommend to the Ministry of Health, Kingdom of Saudi Arabia, to make surveillance committees that may play a key role in monitoring such practices. Furthermore, media should increase awareness in the community about the hazards of using non-prescribed medications. We also recommend the Saudi Food and Drug Authority to make keep a watchful eye over drug companies and pharmacists.

Conclusion

The frequency of using non-prescribed medications in Majmaah city was high. Antibiotics, pain-killers and antipyretics were the most used medications. Men used non-prescribed medications more than did women. Socioeconomic status and educational level had no relationship with usage of non-prescribed medications.

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