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Self-medication among medical students in Anbar and Fallujah Universities – Iraq

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Abstract:

Background: Self-medication (SM) is a worldwide issue, that has serious adverse effects on individuals and communities.

Objective: To estimate the prevalence of self- medication among medical student in Anbar and Falluja Universities and to explore the important reasons for using self-medication. To identify the common sources and types of self-medication drugs.

Method: A descriptive cross-sectional study was carried out among medical students in Anbar and Fallujah Universities during the period from February to March 2018. The subjects were asked to fill a questionnaire that consisted of questions on age, gender and educational level, in addition to questions for self-medication history.

Results: The results revealed that 73% of medical students had practice of self- medication. A higher prevalence of self-medication was found among 5th study year students. Antibiotics were the most frequent self-prescribe medicine that used by 137 (49.6%) of the participants, followed by analgesic (29%), and supplements by 40 (14.5%). The most frequently given reasons for using self-medication were previous prescription and of pharmacists' advice.

Conclusion: A high prevalence of self- medication was found among medical students in Falluja & Anbar Universities with a statistical significant association between gender and self- medication practice.

Keywords: Medical students, self - medication, Falluja University, Anbar University, Iraq.

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Introduction:

Self –medication can be defined as the usage of medicines for the management the symptoms without consulting a physician (1). The World Health Organization (WHO) defined self-medication as 'the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms" (2) Self –medication (SM) is a worldwide issue, that has serious adverse effects on individuals and communities including pathogens resistance, hypersensitivity, drug dependence and economic burden (3-5). Self-medication may delay the diagnosis of the diseases by changing the signs and symptoms possibly affecting disease prognosis (6). The literature demonstrates that the prevalence of self-medication varies among medical students in different countries, with varying the prevalence according to medical study year, increasing from first to higher levels of study (7).

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Studies showing that the prevalence of self-medication among university students ranges from 68% to 98% (4, 8, 9). Self- medication is a common phenomenon among populations in developing countries (10, 11), the most commonly reported reasons for self-medication usage are fast relief, treatment of minor illnesses and availability of medicines. However unrestricted access to medications from pharmacies without a medical consultation is considered as a great risk on individuals (7). Education of the general public, especially the university students about rational usage of the self- medication is necessary for their safety and for ensuring proper use of the self-drug medication (4,12). Assessing the prevalence of self-medication and identifying its cause will ensure the proper use of medications by the general public (11). Studies that describe the self-medication issue among university students in Iraq are scarce.

Methods:

Study design: A descriptive cross-sectional study was carried out on a group of students of medical colleges of Anbar and Falluja Universities in the west of Iraq. Instruments: A questionnaire was developed by the Community Medicine Department of Medical College - Falluja University

and consisted of questions on demographic characteristics such as age, gender, educational study level. In addition, questions included the type of self-medication purchased, sources of medications information, and reasons for self-medications, symptoms or illness for which the medication was used . The questionnaire consisted of questions with closed responses.

Data collection: was conducted during February and March 2018. Study participants: The questionnaire was distributed to 400 medical students by dividing each college into five study levels. Participants were selected conveniently. Permission to conduct the study was obtained from faculties of both medical colleges. The questionnaire was revised by a scientific committee for reliability and validity. The students in each study level received a 15 minutes briefing to explain the aims of the study and the questionnaire items. The questionnaire was anonymous; each student was given the complete unconditional choice to participate in the study without any reward or penalty and was assured that confidentiality of data throughout the study would be secured and that the data would not be used for purposes other than the current research. The questionnaire was translated to the Arabic language for the purpose of simplification and then retranslated into English for validation. Verbal consent was obtained from the subjects to participate in the study. The questionnaire was filled by the subjects themselves. Data analysis: Data entry and analysis was done by using Excel program and SPSS version 20. The Chi square test was used to measure the association between demographic variables and history of self- medication; a P value < 0.05 was considered as statistically significant .

Results:

Out of the total (400), the questionnaire was answered by 276 medical students of Anbar and Falluja University (response rate was 69%). The age of the subjects ranged between 18 and 32 years (mean ± SD 21 ± 1.8), with more females (58.3%) than males (41.7%). The second year students were 87 (31.5%), followed by fourth year 59(21.4%), first year 56 (20.3%), third year 41(14.9%), and fifth year 33 (12%), as shown in Table 1 .The results revealed that about 73% of medical students had practice of self- medication during the previous months (Table 2). A higher proportion of females, 125 (78%) had a history of self- medication compared to 76 (66%) of males. A higher frequency of self-medication was found among fourth and fifth year students with a statistically significant association between gender and study years with self-medication history (Table 3). The most widely used self-medication drugs that used by the participants were antibiotics stated by 137 (49.6%) of the participants, followed by analgesic that stated by 80 subjects (29%), then supplements stated by 40 (14.5%), while using the antispasmodics was stated by 26 (9.4%), sedative drugs stated by 15 (5.4%) and hypnotics stated by 5 of the subjects (1.8%) (Table 4). The most frequent reason for using self-medication was previous prescription which mentioned by 90 participants (32.6%) , followed by advising of pharmacist advice reported by 36 participants (13%),(Table 5). The most common symptom leading to the use of the self-medications was sneezing which reported by 72 (26.1%), followed by headache stated by 67 (24.3%), vomiting or abdominal pain mentioned by 21 (7.6%), then fever 13(4.7%),then muscular pain 12 (4.3%), then stress 11 (4%), and 2(0.7%) for anxiety / depression (Table 6).

Table (1) Socio-demographic characteristics of the subjects

Gender		Frequency	Percent	Cumulative Percent
	Male	115	41.7	41.7
	Female	161	58.3	100.0
	Total	276	100.0	
Study year				
	1st stage	56	20.3	20.3
	2nd stage	87	31.5	51.8
	3rd stage	41	14.9	66.7
	4th stage	59	21.4	88.0
	5th stage	33	12.0	100.0
	Total	276	100.0	
Total		276	100.0	

Table (2) Prevalence of self –medication

Table (2)		Frequency	Percent	Cumulative Percent
Valid	Yes	201	72.8	72.8
	No	75	27.2	100.0
	Total	276	100.0	

Table (3) Association between gender, study year and self -medication

		Self-medication Yes %	No %	Total	P*
Gender					
Male		76	39	115	0.04
Female		125	36	161	
Total		201	75	276	
Stage (Study level)	1st stage	34	22	56	0.008
	2nd stage	64	23	87	
	3rd stage	25	16	41	
	4th stage	50	9	59	
	5th stage	28	5	33	
Total		201	75	276	

***P value for chi square test.**

Table (4) Frequency of drugs usage among the students

Drug		Frequency	%
Antibiotic usage	Yes	137	49.6
	No	90	32.6
	Total	227	82.2
Analgesic	Yes	80	29.0
	No	129	46.7
	Total	209	75.7
Antispasmodics	Yes	26	9.4
	No	184	66.7
	Total	210	76.1
Antiemetic	Yes	19	6.9
	No	189	68.5
	Total	208	75.4
Hypnotic	Yes	5	1.8
	No	203	73.6
	Total	208	75.4
Sedative	Yes	15	5.4
	No	192	69.5
	Total	207	75.0
Supplements	Yes	40	14.5
	No	168	60.9
	Total	208	75.4

Table 5 Common symptoms among students who used self- medication

		Frequency	%
Valid	Sneezing	72	26.1
	Headache	67	24.3
	Vomiting or abdominal pain	21	7.6
	Fever	13	4.7
	Muscular pain	12	4.3
	Stress	11	4
	Anxiety, depression, fair	2	0.7
	Total	198	71.7
Missing	System	78	28.3
Total		276	100.0

Table 6 Reasons behind self-medication usage.

		Frequency	%
Valid			32.6
	Previous prescription	90	13.0
	By pharmacist	36	12.7
	Use by other family members or friends	35	5.4
	Clinic far away	15	5.1
	Read in net or social media	14	2.2
	No trust of doctor	6	71.4
	Total	197	28.7
Missing	System	80	100.0
Total		276	

Discussion:

The study was conducted among medical students of Falluja and Anbar Universities at the west of Iraq. The prevalence of self-medication (73%) was high when compared with what was reported in the literature. It was higher than the prevalence of self-medication among medical students of Ain Shams University in Egypt (55%) (13), and among students of Pharmacy and Medicine Colleges of a University in Dammam City in Saudi Arabia (49.3%) (3) and higher than the prevalence of SM among the medical students in the Gulf Medical University (GMU) (65%) (4); and medical, pharmacy, and health science students in Ethiopia 38.5% (14). However it was lower than the prevalence of self-medication among medical students in Kuwait (97.8%) (15) ._Self - medication was significantly higher among females compared to the males, in consistence with what was reported in the literature (16), which might be due to that females being more vulnerable to stress and anxiety (17). A higher prevalence of self-medication was reported among medical students of fifth years medical students which was consistent with other studies which documented that fourth and fifth year students practiced self-medication more when compared with first, second and third year students as they have more information about the medicines (16, 18). Antibiotics were the most frequent drugs that used by the participants as self- medication for treatment of common symptoms, which was consistent with what reports of studies from Egypt, where the using of antibiotics was reported by (41.5%) of the students (13) and in United Arab Emirates where 32% of medical students of Sharjah University used antibiotics as self- medications (19). This finding was inconsistent with other studies as in Saudi Arabia and in Serbia which demonstrated the most self-medications were analgesics (3, 20). This might be due to differences in attitudes, education of population, legislations and rules of dispensing of medicines in the communities. In Iraq, the people can get easily purchase antibiotics from pharmacies without prescriptions of physicians which is a serious issue regarding some serious side effects of antibiotics and the issues of bacterial resistance. Sedative drugs were used by 5.4% of the students suggesting the stressful conditions in their life. The most frequent reason behind the use of self-medications was a previous prescription. Findings of other studies documented that the students practiced self-medication due to prior experience with these medicines (9).

Conclusion:

High prevalence of self- medication was found among medical students in Falluja & Anbar Universities, with a statistically significant association between females and self- medication practice. Antibiotics were highly used as self-medication treatment which is considered as a critical issue due to side effects and emerging of bacterial resistance.

Authors' contributions:

All authors equally contributed to the design, data collection, data analysis and writing of the final article.

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التطبيب الذاتي بين طلاب الطب في جامعات الأنبار والفلوجة – العراق

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المقدمة : التطبيب الذاتي هو مشكلة عالمية ، لها تأثيرات سلبية خطيرة على الأفراد والمجتمعات
طريقة البحث : أجريت دراسة مقطعية وصفية بين طلاب الطب في جامعات الأنبار والفلوجة خلال الفترة من شباط إلى اذار 2018. وقد طُلب من المشاركين ملء استبيان يتكون من أسئلة حول العمر والجنس والمستوى التعليمي، بالإضافة إلى الأسئلة عن التطبيب الذاتي.
النتائج :أظهرت النتائج أن 73٪ من طلاب الطب قد مارسوا التطبيب الذاتي. تم العثور على انتشار أعلى من التطبيب الذاتي بين طلاب السنة الدراسية الخامسة. كانت المضادات الحيوية أكثر الأدوية ا التي استخدمها 137 (49.6٪) من المشاركين، يليها المسكنات (29٪) ، والمكملات الغذائية بنسبة 40 (14.5٪). وكانت الأسباب الأكثر شيوعًا لاستخدام التطبيب الذاتي هي وصفة طبية سابقة ونصيحة الصيادلة.
الاستنتاج : تم العثور على نسبة عالية من التطبيب الذاتي بين طلاب الطب في جامعتي الفلوجة والأنبار مع وجود علاقة ذات دلالة إحصائية بين الجنس وممارسة العلاج الذاتي.
كلمات مفتاحية : طلاب كلية الطب ، التداوي الذاتي، جامعة الفلوجة ، جامعة الانبار ، العراق .