Self-medication Knowledge Among Undergraduate Students in Al-Qalam University – Kirkuk- Iraq, 2019-2020

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ABSTRACT

Background: Over the counter (OTC) medications are used for self-treatment. Profoundly means the use of treatment without a prescription or specialist medical advice. Evaluation of related knowledge is essential to ensure optimal use of medicines.

Objectives: To demonstrate the knowledge of self-medication among undergraduate students at Al-Qalam University – Kirkuk- Iraq 2019-2020, and to find out the relationship between students' knowledge and their demographic data (age, gender, family income).

Methods: This descriptive study involved undergraduate students from 2019-2020 in Al-Qalam University-Kirkuk-Iraq. The sample size consisted of Fifty-nine students from the X-ray and Sonar Technique department from both genders. A questionnaire was constructed to focus on students' knowledge of self-medication and Over the counter (OTC) drugs. Data were collected from 1st October to 30th November 2019. The data were categorized by student age, gender, and family income. Measure of central tendency was used to analyze the data, and the hypothesis was tested using cross-tabulation to study the relationship among variables by Statistical Package for the Social Sciences (V.21).

Results: The socio-demographic characteristics of the study participants show that the age group (20-22) were the highest among study samples (N=59; 37%), (Mean = 2.45, SD= 1.91). The Mean score was utilized as a guideline for determining students' knowledge about self-medication. If the average score is greater than 3, it indicates a satisfying understanding of self-medication; otherwise, it indicates dissatisfaction. There was a significant association in items, related to multiple drugs are more effective than a single medication ($\chi 2$ (12, N =59 = 22.132, p < 0.05), and item related to that more expensive medications are more effective ($\chi 2$ (12, N =59 = 24.696, p < 0.05). Additionally, a significant association was found in items related to that the students were aware of the importance of reading the instruction ($\chi 2$ (2, N =59 = 8.762, p < 0.05).

Conclusion: Self-medication is common practice in the Iraqi community. The outcome of this study is to determine whether there is a need for awareness programs about self-medication for university students. The knowledge of undergraduate students at Al-Qalam University about self-medication is not satisfactory. They tend to use it correctly with little information, so it has become necessary to develop educational programs to increase the knowledge of the potential side effects of these non-prescription medications.

Keywords: Self-medication knowledge, Students' knowledge on self-medication, non-prescribed medications, Over-the-counter (OTC) medications

INTRODUCTION

Over-the-counter (OTC) medications are commonly used for self-treatment. Profoundly means the use of treatment without a prescription or specialist medical advice. Evaluation of related knowledge is essential to ensure optimal use of medicines[1]. Self-medication is a procedure for taking treatment based on a person's opinion, or the opinion of a third party, in which he prescribes medication for himself to treat or prevent a medical condition of unknown origin and severity[2].

Self-medication with over-the-counter (OTC) drugs is a concern for human health, especially in the health-targeted groups of pregnant women, as it is dangerous for both the mother and the fetus. Studies are few about some factors such as knowledge impacting self-medication[3].

Pharmaceutical vendors are filling the gap created by the inadequacy of skilled pharmacists to trade medicines in non-industrialized countries[4-6]. In addition, the use of self-medication is a common practice in developed countries[7].

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Humans tend to use herbs and medicines to treat themselves. People worldwide act on their own through self-care. Self-medication is now increasingly seen as an element of self-care. Medications intended to reduce fever and pain relievers are commonly used for self-treatment. Pharmacists play a significant role in self-medication since pharmacists are the source of their drug information[8,9].

OBJECTIVES

To demonstrate the knowledge of self-medication among undergraduate students at Al-Qalam University – Kirkuk- Iraq 2019-2020, and to find out the relationship between students' knowledge and their demographic data (age, gender, family income).

METHODS

This descriptive study involved undergraduate students from 2019-2020 in Al-Qalam University-Kirkuk-Iraq. A sample size of Fifty-nine students from the X-ray and Sonar Technique department from both genders were recruited. A questionnaire was constructed to focus on students' knowledge of self-medication and Over-the-counter (OTC) drugs. Data were collected from 1st October to 30th November 2019. The data were categorized by student age, gender, and family income. A measure of central tendency was used to analyze the data, and the hypothesis was tested using cross-tabulation to study the relationship among variables by Statistical Package for the Social Sciences (V.21).

RESULTS

The socio-demographic characteristics of the study participants were present in (Table 1) and shows distributions of students' knowledge related to self-medications were present in (Table 2). The age group (20-22) were the highest among study samples (N=59; 37%). and

showed (Mean = 2.45, SD= 1.91). The Mean score is utilized to determine students' knowledge about self-medication. If the average score is greater than 3, it indicates a satisfying understanding of self-medication; otherwise, it indicates dissatisfaction.

Chi-square Analysis: Chi-square analysis was used to determine the independence of two variables (Tables 3,4 and 5). There was a significant association in items, related to multiple drugs are more effective than a single medication (χ^2 (12, N =59 = 22.132, p < 0.05), and item related to that more expensive medications are more effective (χ^2 (12, N =59 = 24.696, p < 0.05). Additionally, a significant association was found in items related to that the students were aware of the importance of reading the instruction (χ^2 (2, N =59 = 8.762, p < 0.05).

DISCUSSION

The outcome of this study is to determine whether there is a need for awareness programs about self-medication for university students. Self-medication is an alternative treatment used by community members to increase their livelihoods to afford treatment, which can be expensive[10-13]. A study reported a good level of knowledge about self-medication among medical students with a low level of commitment and recommended improvement of practice to reflect the positive impact of the knowledge[14]. The World Health Organization has declared that the use of self-medication is a significant factor leading to an increase in the use, misuse and resistance of antibiotics[15,16]. The present study shows statistical significances related to the use of multiple drugs to be more effective than a single medication, and more expensive medications are more effective. And that student, before using drugs, the students are aware of the importance of reading the instruction before using drugs. Self-medication is a global problem among college students and is a growing public health concern prevalent in developing countries. It

Table 1: Socio-demographic characteristics of the study sample

Items		F	%
Age	< 20	7	12
	20 – 22	37	63
	23 – 25	15	25
	Total	59	100
Mean (21.45) – SD (1.91)			
Gender	Male	26	44
	Female	33	56
	Total	59	100
Mean (1.56) – SD (0.5)			
Marital Status	Single	48	80
	Married	11	20
	Total	59	100
Mean (1.2) – SD (0.4)			
Academic Level	Second Year	23	39
	Third Year	36	61
	Total	59	100
Mean (2.6) – SD (0.49)			
Smoking	Yes	12	20
	No	47	80
	Total	59	100
Mean (1.7) – SD (0.4)			
Family income (by Iraqi Dinar)	Low (500,000 ID)	29	49%
	Medium (1,000000 ID)	29	49%
	High (1,500,000 ID)	1	2%
	Total	59	100
Mean (1.5) – SD (0.5)			

Table 2: Distributions of students' knowledge related to self-medications

No.	Items	Agree		Neutral		Disagree		Total		MS	SD
		F	%	F	%	F	%	F	%		
1	Medicines are required for the treatment of illnesses.	48	81.4	5	8.5	6	10.2	59	100.0	1.2	.61112
2	Medication side effects are a source of concern for me.	48	81.4	1	1.7	10	16.9	59	100.0	1.2	.44643
3	Even when I'm unwell, I prefer to avoid taking drugs.	32	54.2	11	18.6	16	27.1	59	100.0	1.6	.78263
4	Over-the-counter (OTC) medications are completely safe.	9	15.3	2	3.4	48	81.4	59	100.0	1.8	.41873
5	Prescription drugs are effective.	38	64.4	9	15.3	12	20.3	59	100.0	1.5	.75139
6	Self-medication can cause a delay in the diagnosis of an illness.	31	52.5	11	18.6	17	28.8	59	100.0	1.6	.77926
7	Before using drugs, I am aware of the importance of reading the instruction.	49	83.1	6	10.2	4	6.8	59	100.0	1.2	.63871
8	Multiple drugs are more effective than a single medication.	7	11.9	8	13.6	44	74.6	59	100.0	2.0	.50826
9	More expensive medications are more effective.	11	18.6	12	20.3	36	61.0	59	100.0	2.0	.62949
10	New drugs are more effective than older ones.	28	47.5	13	22.0	18	30.5	59	100.0	1.7	.80072
11	For minor health problems, a pharmacist is a good place to go.	34	57.6	9	15.3	16	27.1	59	100.0	1.5	.74749
12	Medicines are harmful, even when taken in accordance with doctor's advice.	26	44.1	16	27.1	17	28.8	59	100.0	1.8	.83362

Table 3: Group differences between students' age and their knowledge toward self-medication

	Items	x^2	df	P-value	Sig.
1	Medicines are required for the treatment of illnesses.	20.639	12	.056	NS
2	Medication side effects are a source of concern for me.	8.211	12	.768	NS
3	Even when I'm unwell, I prefer to avoid taking drugs.	14.379	12	.277	NS
4	Over-the-counter (OTC) medications are entirely safe.	17.804	12	.122	NS
5	Prescription drugs are effective.	18.073	12	.113	NS
6	Self-medication can cause a delay in the diagnosis of an illness.	12.919	12	.375	NS
7	Before using drugs, I am aware of the importance of reading the instruction.	7.476	12	.825	NS
8	Multiple drugs are more effective than a single medication.	22.132	12	.036	Sig. >.05
9	More expensive medications are more effective.	24.696	12	.016	Sig. >.05
10	New drugs are more effective than older ones.	20.904	12	.052	NS
11	For minor health problems, a pharmacist is a good place to go.	15.854	12	.198	NS
12	Medicines are harmful, even when taken under the doctor's advice.	12.856	12	.380	NS

Table 4: Group differences between students' gender and their knowledge toward self-medication

	Items	x^2	df	P-value	Sig.
1	Medicines are required for the treatment of illnesses.	2.403	2	.301	NS
2	Medication side effects are a source of concern for me.	1.930	2	.381	NS
3	Even when I'm unwell, I prefer to avoid taking drugs.	3.030	2	.220	NS
4	Over-the-counter (OTC) medications are entirely safe.	2.961	2	.228	NS
5	Prescription drugs are effective.	4.288	2	.117	NS
6	Self-medication can cause a delay in the diagnosis of an illness.	1.036	2	.596	NS
7	Before using drugs, I am aware of the importance of reading the instruction.	8.762	2	.013	Sig. >.05
8	Multiple drugs are more effective than a single medication.	.778	2	.678	NS
9	More expensive medications are more effective.	.264	2	.876	NS
10	New drugs are more effective than older ones.	1.913	2	.384	NS
11	For minor health problems, a pharmacist is a good place to go.	1.499	2	.473	NS
12	Medicines are harmful, even when taken under the doctor's advice.	.388	2	.824	NS

Table 5: Group differences between family income and student knowledge toward self-medication

	Items	x^2	df	P-value	Sig.
1	Medicines are required for the treatment of illnesses.	2.255	4	.689	NS
2	Medication side effects are a source of concern for me.	7.256	4	.123	NS
3	Even when I'm unwell, I prefer to avoid taking drugs.	5.283	4	.259	NS
4	Over-the-counter (OTC) medications are completely safe.	8.477	4	.076	NS
5	Prescription drugs are effective. .	4.872	4	.301	NS
6	Self-medication can cause a delay in the diagnosis of an illness.	1.681	4	.794	NS
7	Before using drugs, I am aware of the importance of reading the instruction.	2.235	4	.693	NS
8	Multiple drugs are more effective than a single medication.	.515	4	.972	NS
9	More expensive medications are more effective.	2.528	4	.640	NS
10	New drugs are more effective than older ones. .	6.372	4	.173	NS
11	For minor health problems, a pharmacist is a good place to go.	2.049	4	.727	NS
12	Medicines are harmful, even when taken in accordance with doctor's advice. .	3.007	4	.557	NS

can lead to serious consequences such as misuse and abuse of drugs, in addition to the expected side effects of drugs[17].

CONCLUSION

Self-medication is common practice in the Iraqi community. The knowledge of undergraduate students at Al-Qalam University about self-medication is not satisfactory. They tend to use it correctly with little information, so it has become necessary to develop educational programs to increase the knowledge of the potential side effects of these non-prescription medications and to prepare graduates to perform the everyday tasks in the health facilities in which they will work after graduation or in their lifetime.

REFERENCES

1. Medusa D, Suryanegara FDA, Natalia DA, et al. Public knowledge of self-medication in Ngaglik subdistrict of Sleman regency. J Kedokt dan Kesehat Indones 2020;11(3):250-6.
2. Alves RF, Precioso J, Becoña E. Knowledge, attitudes and practice of self-medication among university students in Portugal: A cross-sectional study. NAD Nord Stud Alcohol Drugs 2021;38(1).
3. Atmadani RN, Nkoka O, Yunita SL, et al. Self-medication and knowledge among pregnant women attending primary healthcare services in Malang, Indonesia: A cross-sectional study. BMC Pregnancy Childbirth 2020;20(1):1-11.
4. Auta A, Omale S, Folorunsho TJ, et al. Medicine vendors: Self-medication practices and medicine knowledge. N Am J Med Sci 2012;4(1):3289486
5. Naji AB, Ahmed MM, Younis NM. Adherence the Preventive Measure Against for COVID-19among Teachers at University of Mosul. Int J Medical Toxicol Legal Med 2021;24(3).
6. Younis NM, Mahmoud M, Ahmed A, et al. University Students'Attitude Towards E-Learning. Bahrain Med Bull 2021;43(2):460-2.
7. Curé O. Semi-automatic data migration in a self-medication knowledge-based system. In: CEUR Workshop Proceedings. 2005.
8. Sandeep A, Mamatha GT, Begum SS. Self-Medication: Knowledge and Practice among Urban and Rural Population. Int J Pharm Biol Arch 2013;4(3): 358-61.
9. Ahmed MM, Younis NM, Hussein AA. Violence towards nurses staff at teaching hospitals in Mosul City. Indian J Forensic Med Toxicol 2020;14(3):2598-603.
10. Muwfaq YN, Ahmed MM, Abdulsalam RR. Assessing Quality of Life in Palliative Care. Bahrain Med Bull 2021;43(3):594-96.
11. Younis NM, Ahmed MM, Hussein AA. Nurses' knowledge, attitude and practice towards preparedness of disaster management in emergency of mosul teaching hospitals. Medico-Legal Update 2020;20(3):775-79.
12. Chusun C, Lestari NS. Gambaran Pengetahuan Masyarakat Dalam Pengobatan Sendiri (Swamedikasi) Untuk Obat Analgesik. J Ris Kefarmasian Indones 2020;2(3):227-36.
13. Ahmed MM, Younis NM, Hussein AA. Prevalence of Tobacco use among Health Care Workers at Primary Health care Centers in Mosul City. Pak J Med Health Sci 2021;15(1): 421-4.
14. Haque S, Alam NN, Mushroor S, et al. Association between knowledge of self-medication and adherence among medical students in Dhaka, Bangladesh. Res J Pharm Technol 2017;10(5).
15. Jamhour A, El-Kheir A, Salameh P, et al. Antibiotic knowledge and self-medication practices in a developing country: A cross-sectional study. Am J Infect Control 2017;45(4):384-8.
16. Younis NM, Ahmed MM, Dhahir NM. Prevalence of Covoravirus among Healthcare Workers. Int J Med Toxicol Legal Med 2021;24:1-2.
17. Hanafy SA, Gad ZM, El Bourgy et al. Self-medication among Alexandria University students and effect of an educational intervention on their self-medication knowledge, attitudes and practices. Int J Community Med Public Health 2020;7(4):1205-14.