

Evaluation of Self-Medication Practices and Awareness among Students in Al Qassim Region of Saudi Arabia

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Abstract

Objective: The aims of this study were to evaluate the students' knowledge, awareness and the reasons behind self medication in two higher education institutions in Al Qassim region of Saudi Arabia.

Subjects and method: This pre-validated anonymous questionnaire was used in English and Arabic language that contained both open ended and close ended questions and it was distributed among students of two higher education institutions of Al Qassim region i.e. Buraydah Private Colleges and Qassim University. A total number of 61 students from Buraydah Private Colleges studying in different levels belong to pharmacy, dentistry and nursing college participated in this study and 71 students of final year medical college in Qassim University participated in the study. The data has been analyzed by descriptive statistics and summarized in frequencies and percentages.

Results: Self medications were very common among students of Qassim University (QU) and Buraydah Private Colleges (BPC) and about more than two third students have practiced self medication in past year prior to this study. Majority of participants in our study self medicated for one week to treat self-recognized or self-diagnosed conditions and most of them obtained their medication from pharmacy. About one half of BPC students and slightly more than one half QU students used antibiotic as self medication. The awareness of rational use of medicine was found 63.3% among QU students and 45 % in BPC students. The highly significant difference ($p < 0.05$) was observed between the students of QU and BPC about the rational use of medication. The main reason for self medication in our study was found to be non serious health problems and quick relief.

Conclusion: The self medication practice among students of two higher educational institutions of Al Qassim region was high and often inappropriate. There was an alarming self medication of antibiotics among students that was obtained from local pharmacies without prescription.

Keywords: Self-medication; Al Qassim; Saudi Arabia; Nonprescription drugs

Introduction

Self medication is the use of medication without professional supervision to alleviate an illness or condition [1,2,3]. Over the counter drugs or non prescription drugs are dispensed without prescription for minor conditions [4]. Self medication may be economical and time saving if practiced properly. Moreover, it provides cheaper alternative to treat common illnesses [5].

Self medication is not restricted to OTC drugs only [6]. The prescription drugs like antibiotics are commonly used as self medication in many countries where the regulations are not strict [7,8]. It is suspected that the prevalence rate of self medication is high in Saudi Arabia and only few studies have been done in Saudi Arabia [9,10,11]. Furthermore, the poor implementation of drug policies in developing countries makes prescription medication accessible as non prescription product [12]. The world health organization stressed upon the strict and controlled use of self medication [5]. The wastage of resources, serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence are due to inappropriate use of self-medications [13,14]. The aims of the study were to evaluate the students' knowledge, awareness and the reasons for self medication in two higher education institutions of Al Qassim region.

Subjects and Methods

This study was pre-validated anonymous questionnaire based survey approved by the research and ethical board of Buraydah Private

Colleges. It was undertaken from November 2013 till April 2014.

This pre-validated anonymous questionnaire was used in English and Arabic language that contains both open ended and close ended questions taken from other studies [15,16]. The study population included students from two higher education institutions in Al Qassim region i.e. Buraydah Private Colleges (BPC) and Qassim University (QU). A total number of 61 students from Buraydah Private Colleges belong to pharmacy, dentistry and nursing college studying in various levels and 71 final year students of medical college in Qassim University participated in the study. All students were briefed about the purpose of study and the procedure to complete this questionnaire was explained. The questionnaire included six questions on self medication practices in the past year, duration of use, source of obtaining self medication, rational use of self medication, antibiotic used as self medication and reasons for self medication (Table 1).

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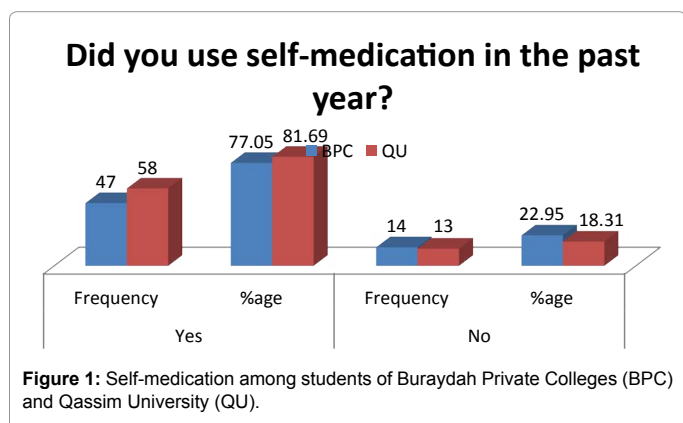
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Did you use self-medication in the past year?	
• Yes	
• No	
How long the treatment was used?	Reason for self-medication
• One week	• Health problem is not serious
• Two weeks	• Seeking quick relief
• One month	• Personal convenience
• Longer than a month	• Avoidance of long waiting at clinics
Where from you obtained self-medication?	• High cost of medical consultation
Pharmacy	• Suggestion of a relative/friend
• Street market	• Learning opportunity
• Herbal store	• Self-need to play active role
• Relative/friend	• Physician's advice of self-management
Antibiotic obtained as self-medication.	• Physician prescription was not effective
• Yes	• I do not trust my physician
• No	• Illness is minor
Duration of use	• Embarrassed of discussing own symptoms
• One week	
• Two weeks	
Awareness of rational drug use.	
• Aware	
• Not aware	

Table 1: Questionnaire of Self-medication by students of higher education institutions in Al Qassim in the past year.

street markets were least preferred for obtaining self medications by almost 98.5 % of total participants. Furthermore, about one half of BPC students (49.18%) and slightly more than one half QU students (59.15%) obtained antibiotic as self medication (Figure 2). Figure 3 shows that most of participants self medicated for one week (QU=61.97%, BPC=77.05%). Figure 4 shows that final year medical students of QU were more aware (n=45, 63.38%) of rational use of self medication than pharmacy, dentistry and nursing students of BPC (n=10, 16.39%). The highly significant difference (p< 0.05) was observed between the students of Qassim University and Buraydah Private Colleges about the rational use of medication.

The study also examined the reasons for self medication among students of these institutions. According to majority of participants (QU: n=31, 43.6%; BPC: n= 24, 39.3%) the reason of self medication included health problem being not serious while embarrassed of discussing own symptoms was found to be the reason of self medication among least number of participants (QU: n=4, 5.6%; BPC: n=2, 3.2%). Seeking quick relief was the second major reason for self medication among final year medical students (n=28, 39.4%) of QU but pharmacy, dentistry and nursing students (n=11, 18.03%) of BPC ranked avoidance of long waiting at clinics as second most important reason of self medication. The respond on reason of self medication by participants of BPC and QU is shown in Table 3.



Statistical Analysis

The data has been analyzed by descriptive statistics and summarized in frequencies and percentages. A statistical significance level of 0.05 was used to determine the association between the study groups at Qassim University and Buraydah Private Colleges for awareness of rational drug use. A p<0.05 was considered statistically significant.

Ethics approval

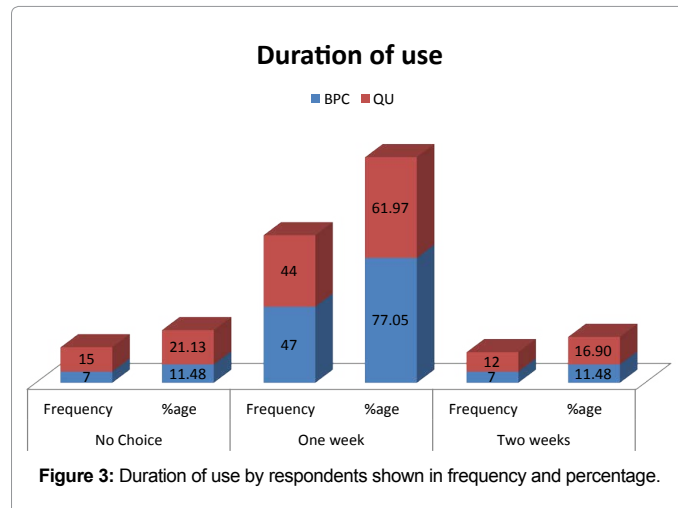
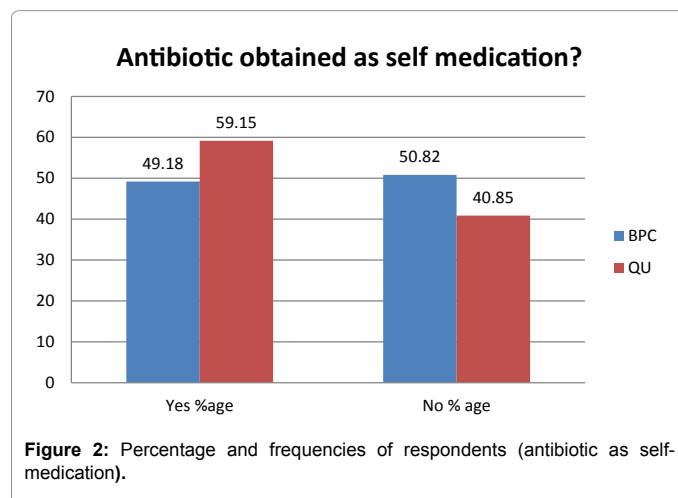
This study was approved by research and ethical board of Buraydah Private Colleges, November 2013.

Results

The questionnaire was completed by 100% participants i.e. 132 students. Of the total 132 students 44% (n=61) were from Buraydah Private Colleges (BPC) and 53% (n=71) belonged to Qassim University (QU) have participated in this study.

Figure 1 shows self medication practice in the past year among BPC and QU students. 47 (77.05%) respondents from BPC and 58(81.69%) from QU practiced self-medication in the last year.

Majority of participants i.e. 59% QU and 70.5% BPC have practiced self-medication for one week (Table 2). Table 2 shows similar results (BPC=80%, QU=79%) regarding pharmacy as a choice for obtaining self medications by majority of respondents from BPC and QU. The



Awareness of rational drug use

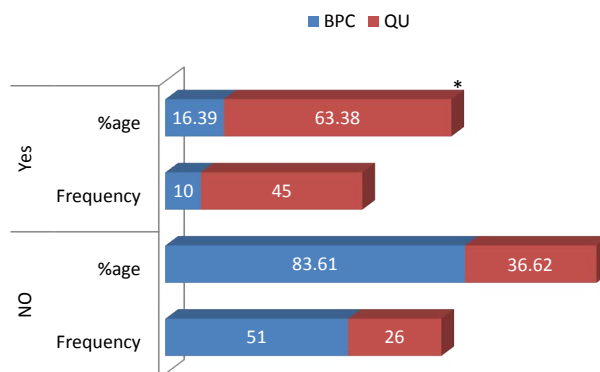


Figure 4: Awareness of rational drug use by respondents in percentage and frequencies. *Statistically significant ($p < 0.05$).

How long the treatment was used?	Number of respondents					Percentage				
	one week	Two weeks	one month	More than 1 month	No Choice	one week	two weeks	one month	More than 1 month	No choice
QU	42	11	3	3	12	59%	15.5%	4%	4%	17%
BPC	43	12	2	2	5	70.5%	20%	3%	3%	8%

Where from you obtained self-medication?	Number of respondents					Percentage				
	Pharmacy	Street market	Herbal Store	Relative/friend	No Choice	Pharmacy	Street market	Herbal Store	Relative/friend	No Choice
QU	56	1	3	10	8	79%	1.4%	4%	14%	%
BPC	49	1	3	3	5	80%	1.6%	5%	5%	8%

Table 2: No of respondents and percentage of self-medication practice questions in the last year.

Reason for self-medication	Qassim University (QU)		Buraydah Private Colleges (BPC)	
	Frequency	percentage	Frequency	percentage
Health problem is not serious	31	43.66	24	39.34
Seeking quick relief	28	39.44	9	14.75
Personal convenience	16	22.54	9	14.75
Avoidance of long waiting at clinics	14	19.72	11	18.03
High cost of medical consultation	6	8.45	3	4.92
Suggestion of a relative/friend	14	19.72	4	6.56
Learning Opportunity	7	9.86	7	11.48
Self-need to play active role	3	4.23	6	9.84
Physician's advice of self-management	5	7.04	4	6.56
Physician prescription was not effective	4	5.63	7	11.48
I do not trust my physician	2	2.82	6	9.84
Illness is minor	6	8.45	10	16.39
Embarrassed of discussing own symptoms	4	5.63	2	3.28

Table 3: Reasons for self-medication among students of Buraydah Private Colleges and Qassim University.

Discussion

Our study showed that more than two thirds of the respondents (BPC=77%, QU=81.6%) have practiced self medicated in the past year. The findings support the prevalence of self medication in previous studies [10,11] done at Saudi Arabia. It is worth noting that prevalence rate in another study [15] at Bahrain University students is 86% and almost similar results were found in one study [17] at Kuwait i.e. 92%. The prevalence rate of self medication has been reported in some other studies among university students i.e. 45% in Turkey [18] and 94% in Hong Kong [19]. The prevalence of self medication mainly depends on

demographics and socioeconomic profiles of countries.

Most of participants (QU=59%, BPC=70.4%) in our study have used self medication for one week duration however few respondents (QU=4.2%, BPC=3.2%) have used for more than month. These findings have similarity with one study [15] among university students at Bahrain that shows majority of participants (63%) have used self medication for one week and only 8% practiced self-medication for more than one month. The probable reason for less number of participants using medication for more than one month could be the chronic therapy for an undiagnosed condition or chronic disease like asthma, arthritis

etc. Further studies are required to find the causes of long term self medication among patients.

It is evident from many studies [11,18,12] that pharmacy is the major source of getting self medications. Similar results (QU=78.87%, BPC= 80.33%) have been found in our study. Herbal stores (QU= 4.2%, BPC=4.9%) and street markets (QU=1.4%, BPC=1.6%) are least used source for obtaining self medication. The availability of wide range of medications makes pharmacy as most important choice of getting medications [20].

Our study indicated that self medication with antibiotic was used among nearly half percent (QU=59.1%, BPC= 49.1%) of respondents. One study from Saudi Arabia [12] has reported the use of antibiotic as over the counter drug by students. The strong likelihood is that any individual can buy prescription drugs in Saudi Arabia except for few drugs that require special prescription for dispensing [12]. Some examples of prescription drugs in Saudi Arabia according to Saudi food and drug authority [21] include antibiotics like amoxicillin, levofloxacin, and cefazolin. The list of prescription and non prescription drugs in Saudi Arabia is available at Saudi food and drug authority website [17]. Saudi food and drug authority should be strict and organise awareness campaigns for proper use of medications in general population and healthcare professionals. Almost similar results have been found in many studies conducted among students in various countries i.e. 35.2% among university students in Pakistan [22], 32% among Sharjah University students [15], 42.2% of the medical and 48% of the non-medical students in Iran used antibiotic as self-medication [7]. Amoxicillin was most commonly used antibiotic [6,7,23] and throat symptoms were the major reason for antibiotic use as self-medication [24].

The awareness of rational use was found 63.3% among QU students and 45 % in BPC students. A total of 53% of respondents in one study at Sharjah university students have found to be aware of rational drug use [15]. The main reason for self medication in our study was found to be non serious health (QU=43.6%, BPC=39.3%) problems and quick relief (QU=39.4%, BPC=14.7%). Various studies have supported these reasons for most frequent self medication among participants [15, 16, 22]. The least common reason for self medication was feeling of embracement while discussing own symptoms (QU=5.6%, BPC=3.2%). The finding was of some similarity to study in Sharjah University students that indicate 7% participants use self medication due to embracement of discussing their symptoms [15].

Conclusion and Recommendations

The high use of self medication was found among students in higher education institutions of Al Qassim region of Saudi Arabia. The inappropriate practices of self medication such as use of antibiotics as self medication among these students were alarming. The health authorities in Saudi Arabia should take strict measures to stop the dispensing of prescription drugs for self medication.

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References

1. Abdelmonein SA, Eman R, Hussain A (2008) Self-medication practices among Diabetic patients in Kuwait. *Medical principles and practices*.17: 315-320.
2. James H, Handu SS, AlKhaja KAJ, Otoom S, Sequeria RP (2006) Evaluation of the knowledge, attitude and practice of self-medication among first year medical students. *Med Princ Pract*. 15: 270-275.

3. Montastruc JL, Bagheri H, Geraud T, Lapeyre-Mestre M, (1997) Pharmacovigilance of self-medication. *Therapie*. 52: 105-110.
4. Sontakke SD, CS Bajait, SA Pimpalkhute, KM Jaiswal, Jaiswal SR, (2011) Comparative study of evaluation of self-medication practices in first and third year medical students *Int. J. Biol. Med. Res*. 2: 561-564.
5. World Health Organization: The role of the pharmacist in self-care and self-medication. Report of the 4th WHO Consultative Group on the Role of the Pharmacist. The Hague, 1998.
6. Abasaeed, A, Jiri V, Mohammed A, Ales K (2009) Self-medication with antibiotics by the community of Abu Dhabi Emirate, United Arab Emirates *J. Infect. Dev. Ctries*. 3: 491-497.
7. Sarahroodi S, Arzi A, Sawalha AF, Ashtarinezhad A (2010). Antibiotics self-medication among southern Iranian university students *International journal of pharmacology*. 6: 48-52.
8. Abay SM, Amelo W (2010) Assessment of self-medication practices among medical, pharmacy, and health Science Students in Gondar University Ethiopia. *Journal of Young Pharmacists*. 2: 306-310.
9. Saeed MS, Alkhashaiban AS, Al-Worafi YMI, Long CM (2014) Perception of self-medication among university students in Saudi Arabia, *Archives of Pharmacy Practice* 5: 149-152.
10. Suleiman AK (2013) Self-medication and the advisory role of pharmacists in Riyadh, Saudi Arabia *Arch Pharma Pract*. 4: 180-185.
11. Alghanim SA (2011) Self-medication practice among patients in a public health care system *East Mediterr Health J*. 17: 409-416.
12. Almalak H, Albluwi AAI, Alkhelb DA, Alsaleh HM, Khan TM et al. (2014) Students' attitude toward use of over the counter medicines during exams in Saudi Arabia. *Saudi Pharmaceutical Journal*, 22: 107-112.
13. Hughes CM, McElnay JC, Fleming GF (2001) Benefits and risks of self medication. *Drug Saf*. 24: 1027-1037.
14. Clavinjo HA 1995 Self-medication during pregnancy. *World Health Forum*. 16: 403-404.
15. Sharif SI, Ibrahim OHM, Mousli L, Waisi R (2012) Evaluation of self-medication among Pharmacy students. *American Journal of Pharmacology and Toxicology*, 7: 135.
16. Klemenc-Ketis Z, Hladnik Z, Kernsik J (2010) Self-medication among healthcare and non health care students at university of Ljubljana, Slovenia. *Med. Princ. Pract.*, 19: 395-401.
17. Abahusain E, Matowe LK, Nicholls PJ (2005) Self-reported medication use among adolescents in Kuwait. *Medical Principles and practices*. 14: 161-164.
18. Buke C, Limoncu M, Ermevtcan S, Ciceklioglu M, Tuncel M, Kose T et al (2005) Irrational use of antibiotics among university students. *J Infect* 51: 135-139.
19. Lau GS, Lee KK, Luk CT (1995) Self-medication among university students in Hong Kong *Asia Pac J Public Health*. 8: 153-157.
20. Suleiman, A.K, 2013 Self-medication and the advisory role of pharmacists in Riyadh, Saudi Arabia. *Arch Pharma Pract*,4: p.180-5
21. Saudi food and drug authority (2013) Saudi food and drug authority. Available at: http://www.sfda.gov.sa/ar/drug/Documents/Human_Drug_List_Dec_2013_V2_Web.xls [Accessed 05 February 2015]
22. Zafar SN, Syed R, Waqar S, Zubairi AJ, Vaqar T et al. (2008) Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes. *Journal of the Pakistan Medical Association*, 58: 214-217.
23. Skliros E, Merkouris P, Papazafropoulou A, Gikas A, Matzouranis G, Papafragos, C., & Sotiropoulos, A. (2010). Self-medication with antibiotics in rural population in Greece: a cross-sectional multicenter study. *BMC family practice*, 11 58.
24. Grigoryan L., Haaajer-Ruskamp F. M., Burgerhof J. G., Mechtler R., Deschepper R., Tambic-Andrasevic A., & Birkin J. (2006). Self-medication with antimicrobial drugs in Europe. *Emerging infectious diseases*, 12: 452-459