

Self medication practice among undergraduate pharmacy students in Kathmandu Valley, Nepal

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Abstract

Background

Self medication is practice by a pharmacist or lay person to treat minor health problem or symptoms without prescription. The study was conducted to evaluate the medication pattern, behaviour, practice and attitude among undergraduate pharmacy students on self medication.

Methods

Descriptive cross sectional questionnaire based study was conducted among 175 pharmacy undergraduates in different institutions within Kathmandu valley, Nepal using prevalidated, five sectional and structured questionnaires.

Results

Non steroidal analgesic, anti-inflammatory and antipyretic drugs (n=235, 38.29%) were mostly preferred for the treatment of fever (n=94, 55.29%) and headaches (n=89, 52.35%), mainly paracetamol (n=144, 23.8%). Community pharmacies (n=136, 80.00%) and pharmacist recommendation (n=76, 44.70%) were main sources of obtaining and selecting particular medicine and its dose (n=108, 63.54%) while friends and family (n=75, 44.11%) remained main source of information. 128(75.29%) always checked up the information on package label or insert, mainly date of manufacturing (n=96, 56.47%) . 70(41.17%) respondents fully and 71(41.76%) of them partly understood the information. 161(94.30%) respondent always checked the expiry date before medicating. Significant proportion perceived it as unacceptable practice with main reasons of being unsafe (n=64, 37.64%) and potential adverse reaction (n=21, 12.35%). 52(30.58%) of them faced adverse reactions or side effects. Allopathic system (n=114, 67.05%) was preferable medication system for self medication.

Conclusion

Most common drugs were NSAIDs, primly paracetamol, cough and cold reliever and GI infection ailments. Students and their profession interrelationship were predominant shaping their attitude and behaviour on self medication.

Key words: Self medication, pharmacy, undergraduate students, questionnaire.

Background

Self care is individual initiative to restore health or deal with minor illness [1-5]. It incorporates extensive concept integrating hygiene, nutrition, lifestyle, environmental factor, socioeconomic factor and self medication [2, 3]. Self medication, often called as non prescription or over the counter medication, is integral part of self care [6]. World Health Organization (WHO, 1998) and International Pharmaceutical Federation (FIP, 1999) jointly defined self medication as practice by an individual or pharmacist or lay person to treat symptom or minor health problems recognised as such by themselves instead of consulting medical practionner[1, 4]. The criteria for considering health problem as minor illness are having limited duration of action and perceived as non-threatening to the patient according to Winfield and Richard(2004)[7].

Prevalence of self medication has remained common in both developing [8] and developed countries [9] but higher in developing countries than developed countries [10]. The trend is increasing among youths [11] and common among University students [2]. Socio-economic factors, lifestyle, readily available drugs and therapy, increased medical consultation cost, time consuming clinical process, lack of nearby access of health care, past experiences, extensive advertisement and easy access over OTC medicine due to emerging pharmaceutical industry are some of the leading reason for people seeking self medication[3, 12, 13]. A study showed 590 cases of intoxication among 26% recorded cases in 2005 were due to self medication [14]. Also, another study had shown 2.9-3.7% cause of death on hospital is due to drug-drug interaction [15]. Further, several studies had pointed that irrational practice of self medication might pose serious health problems like possibilities of adverse reaction, drug-drug interaction, poly-pharmacy, drug abuse and dependence ,antibiotic resistance ,masking of disease symptoms, drug withdrawal symptoms and masking of disease[3,4,15]. Similarly, hypersensitivity, digestive bleeding, risk of neoplasia and incorrect manner of administration are some of risk factors associated with self medication [16, 17]. So, WHO introduced the concept of responsible self medication practice [18] to promote rational use of medicine which can be achievable through appropriate drug information, appropriate labelling in the package and information leaflet [17].Responsible self medication can be contributing factor in prevention of minor illness at affordable cost, reduces pressure on health care system, saves time and stands as strong alternative to treat ailments.[17] The present study was conducted to assess the self medication behaviours, practices and pattern among pharmacy undergraduate students within Kathmandu Valley, Nepal.

Methods

Descriptive cross sectional questionnaire based study conducted between January 4th and June 3rd, 2014.The study was conducted among pharmacy undergraduate students in various pharmacy colleges affiliated to Tribhuvan University, Purbanchal University and Pokhara University including Institute of Medicine within Kathmandu Valley, Nepal. A self administered, structured questionnaire was prepared in English, divided into five sections and constituted both open and close ended questionnaire. Questionnaire was developed between two weeks period, prevalidated among seventeen students online using Google docs application and distributed among 175 students. Self medication was defined as OTC or non prescription drug, whether modern or traditional, for self treatment, without prior consultation of doctor. Total sample size of 175 students was enrolled in present study.

Collected data were entered in Microsoft Excel data sheet and analysed using SPSS Version 20 software. The results were presented using descriptive statistics in frequency and percentage in tables. The objective of the study was explained to all participants and written consent was obtained prior to data collection process. The questionnaire was filled by only those who agreed and all students were affirmed for privacy of their information.

Results

Among 175 filled questionnaires, five were excluded from the study process due to incomplete information such that 170(97.10%) questionnaires were enrolled for the evaluation process. Respondents were allowed to indicate multiple responses around maximum instances.

Demographic profile

Out of 170 participants 83(48.82%) were male and 87(51.17%) were female. Majority of them were between age group 19 and 22 years (n=95, 55.8%).By the year of study, maximum participants (n=104, 61.17%) were second year students.

Table No.1 Demographic profile of participants

Characteristics	Number(N=170)	Percentage
Age		
16-19	14	8.23
19-22	95	55.88
22-25	48	28.23
25 and above	13	7.61
Gender		
Male	83	48.82
Female	87	51.17
Year		
1 st year	26	15.29
2 nd year	104	61.17
3 rd year	20	11.76
4 th year	15	8.82

Disease indication and medication pattern for self medication

Fever(n=94,55.29%),headaches (n=89,52.35%) and cough(n=80,47.06%) were predominant indications for self medication among undergraduate pharmacy students followed by diarrhoea (n=72,42.35%),cold (n=70,41.1%),acidity (n=52,30.58%) and pain condition (n=49,29.92%).

Table No.2 Disease indication for self medication

Indication	Gender		Age group				Total (n=170)
	Male (n=83)	Female (n=87)	16-19 (n=14)	19-22 (n=95)	22-25 (n=48)	25-above (n=13)	
Headache	46(55.42%)	43(49.42%)	1(0.00%)	50(52.69%)	24(50.00%)	4(30.76%)	89(52.35%)
Fever	56(67.46%)	38(43.67%)	2(14.28%)	60(63.15%)	24(50.00%)	8(61.53%)	94(55.29%)
Cough	47(56.62%)	33(37.93%)	3(21.42%)	51(53.68%)	22(45.93%)	4(30.76%)	80(47.06%)
Cold	42(50.60%)	28(32.18%)	3(21.42%)	43(21.42%)	21(43.75%)	3(23.07%)	70(41.17%)
Acidity	31(37.35%)	21(24.13%)	1(7.14%)	33(34.73%)	14(29.16%)	4(30.76%)	52(30.58%)
Diarrhoea	39(46.98%)	33(37.93%)	3(21.42%)	43(42.21%)	20(41.66%)	6(46.15%)	72(42.35%)
Pain condition	28(33.73%)	21(24.14%)	1(7.14%)	35(36.94%)	12(25.00%)	1(7.69%)	49(29.92%)
Other	5(6.02%)	2(2.30%)	1(7.14%)	2(2.10%)	3(6.25%)	1(7.69%)	7(4.11%)

Regarding to the distribution of medicine under different therapeutic category ,it was observed that non steroidal anti-inflammatory, antipyretic and analgesic drug(n=235, 38.29%) were most commonly used .Other commonly preferred groups of medication were cough and cold preparations(n=71,11.67%) , antimicrobials (n=56,9.15%), antihistamine (n=25,4.11%), antibiotics (n=38,6.25%), proton pump inhibitors(n=23,3.79%),H₂ receptor antagonists (n=35,6.25%) and oral rehydration salt(ORS)(n=18,2.96%).

Table No.3 Distribution of medicine under different therapeutic category

Group of drug	Male	Female	Total(n=170)
Anti-inflammatory and antipyretic	116(19.08%)	119(19.57%)	235(38.29%)
Cough and cold preparation	33(5.42%)	38(6.25%)	71(11.67%)
Antimicrobial	23(3.78%)	33(5.42%)	56(9.15%)
Antispasmodic	1(0.163%)	9(1.46%)	10(1.71%)
Antihistamine	12(1.97%)	13(2.14%)	25(4.11%)
Analgesic	9(1.48%)	3(0.49%)	12(1.97%)
Proton pump inhibitor	12(1.97%)	11(1.81%)	23(3.78%)
H ₂ receptor antagonist	20(3.29%)	15(2.46%)	35(5.75%)
Antibiotic	21(3.45%)	17(2.80%)	38(6.25%)
Oral rehydration salt	10(1.64%)	8(1.32%)	18(2.96%)
Antacid	7(1.15%)	15(2.46%)	22(3.61%)
Antihelmenthic	16(2.63%)	30(4.93%)	46(7.56%)
Vitamin supplement	6(0.98%)	5(0.82%)	11(1.80%)
Other	4(0.58%)	2(0.29%)	6(0.99%)

Distribution of medicines over disease indications

When analysed distribution of drug under disease ailments, paracetamol (n=169, 68.42%) and ibuprofen (n=26, 10.52%) were mostly preferred for fever and pain relief. Similarly, the study had shown albendazole (n=44, 30.55%), Jeevanjal (n=16, 11.11%), digene (n=12, 8.83%) and ranitidine (n=20, 13.89%) were frequently preferred for GI disorders and infections. Further, D-cold (n=80, 42.25%), cough syrup (n=10, 14.88%) and strepsl (n=4, 9.86%) were most common in treatment of cough and cold. An important datum is that azithromycin (n=16, 42.11%) was most frequently used antibiotic followed by amoxicillin (n=4, 10.32%) and ampicillin (n=2, 5.26%).

Table No.4 Distribution of medicines over disease indications

Indications	Medicine	Proportion	N
Fever and pain reliever	Paracetamol	169(68.42%)	N=247
	Diclofenac	7(2.83%)	
	Ibuprofen	26(10.52%)	
	Mefanamic acid	12(4.86%)	
GI disorders and infection	Albendazole	44(30.55%)	N=144
	Jeevanjal	16(11.11%)	
	Digene	12(8.33%)	
	Omeprazole	9(6.25%)	
	Rantidine	20(13.89%)	
Cough and cold ailments	D-cold	30(42.25%)	N=38
	Cough syrup	10(14.88%)	
	Strepsl	7(9.86%)	
Antibiotic	Azithromycin	16(42.11%)	N=38
	Ampicillin	2(5.26%)	
	Amoxicillin	4(10.52%)	

Self medication practice among pharmacy undergraduates

Figure revealed that community pharmacies (n=136, 80.00%) were most common source of obtaining drugs for the purpose of self medication. Majority revealed recommendation of community pharmacist (n=76, 44.40%) and own experience (n=54, 31.76%), as basis of selection of medicine. It was noted that indication of use (n=56, 32.94%), types of medicine (n=55, 32.35%), brand of medicine (n=40, 23.52%) were most frequent factors for considering specific medicine. Friends and family (n=76, 44.70%), chemist (n=56, 32.94%) and internet (n=34, 20.00%), were registered as top three sources of information for self medication.

Table No.5 Self medication practice among pharmacy undergraduates

Variables	Gender		Age group				Total (n=170)
	Male (n=83)	Female (n=87)	16-19 (n=14)	19-22 (n=95)	22-25 (n=48)	25-above (n=13)	
Source of self medication							
Community pharmacies	71(85.54%)	65(74.71%)	9(64.28%)	82(86.31%)	34(70.83%)	11(84.61%)	136(80.00%)
Left over previous prescription	4(4.81%)	11(12.64%)	1(7.14%)	9(9.47%)	3(6.25%)	2(15.38%)	15(8.82%)
Local Health institution	7(8.43 %)	24(27.58%)	0(0.00%)	18(18.94%)	7(14.58%)	6(46.15%)	31(18.23%)
Other	3(3.61%)	3(3.44%)	0(0.00%)	4(4.21%)	2(4.16%)	0(0.00%)	6(3.53%)
Basis of selection of medicine for self-medication.							
Recommendations of community pharmacist	32(38.55%)	44(50.57%)	12(85.71%)	43(45.26%)	17(35.41%)	4(30.76%)	76(44.70%)
Opinion of family	8(9.64%)	17(19.54%)	3(21.42%)	16(16.94%)	4(8.33%)	2(15.38%)	25(14.70%)
Advertisement	3(3.61%)	1(1.15%)	0(0.00%)	2(2.10%)	1(2.08%)	1(7.69%)	4(2.35%)
Opinion of friend	3(3.61%)	3(3.44%)	4(28.57%)	1(1.05%)	1(2.08%)	0(0.00%)	6(3.52%)
My own experience	32(38.55%)	22(25.28%)	1(7.41%)	29(30.52%)	17(35.42%)	7(53.94%)	54(31.76%)
Recommendation of net citizen	11(13.25%)	6(6.89%)	0(0.00%)	12(12.63%)	3(6.25%)	2(15.38%)	17(10.00%)
Previous doctor prescription	12(14.45%)	19(21.83%)	1(7.14%)	25(26.31%)	3(6.25%)	1(7.69%)	31(18.23%)
Other	4(4.19%)	4(4.59%)	0(0.00%)	5(5.26%)	0(0.00%)	3(23.07%)	8(4.70%)
Factors considered while selecting specific medicine							
Types of medication	25(30.12%)	30(34.48%)	3(21.42%)	37(39.94%)	13(27.08%)	2(15.38%)	55(32.35%)
Brand of medication	19(22.89%)	21(24.13%)	2(14.28%)	16(16.84%)	14(29.16%)	8(61.53%)	40(20.53%)
Price of medication	10(12.04%)	5(5.74%)	0(0.00%)	9(9.47%)	5(10.41%)	1(7.69%)	15(8.82%)
Indication of use	29(34.93%)	27(31.03%)	3(21.42%)	32(33.69%)	19(39.58%)	2(15.38%)	56(32.35%)
Adverse reaction	13(15.66%)	20(22.98%)	1(7.14%)	22(23.10%)	8(16.66%)	2(15.38%)	33(19.41%)
Source of information							
Chemist	29(34.93%)	27(31.04%)	4(28.57%)	34(35.78%)	15(29.16%)	3(23.07%)	56(32.94%)
Advertisement	11(13.25%)	28(32.18%)	2(14.28%)	15(15.78%)	8(16.66%)	4(30.76%)	29(17.05%)
Friends/family	31(37.24%)	45(51.72%)	5(35.71%)	40(42.10%)	22(45.84%)	4(30.76%)	76(44.70%)
Internet	20(24.09%)	14(16.09%)	2(14.28%)	21(22.10%)	8(16.66%)	3(23.07%)	34(20.00%)
Other	10(12.04%)	4(4.59%)	0(0.00%)	7(7.37%)	5(10.41%)	2(15.38%)	14(8.23%)

Attitude of pharmacy students regarding self medication

When respondent were asked what is their focus on package label or insert while self medicating, majority stated date of manufacturing (n=93, 54.70%) to be their prime focus. Figure revealed that 128(75.29%) always checked available information on package label or insert while self medicating. Among total respondents, 70(41.17%) fully understood the information while 71(41.76%) participants partly understood the information. Almost all respondent 161(94.30%) were found to check expiry date before self medicating. It is to be noted that

62(36.47%) perceived self medication as unacceptable practice while 81(47.64%) said it was an acceptable practice .When asked about the reason for practising self medication to be unacceptable, seldom effectiveness (n=21, 12.35%), adverse reaction (n=28, 16.47%), unsafe (n=64, 37.46%) and likely side effects (n=31, 18.23%) were main reason behind.

Table No.6 Attitude of pharmacy undergraduate students regarding self medication

Variables	Gender		Age group				Total (n=170)
	Male (n=83)	Female (n=87)	16-19 (n=14)	19-22 (n=95)	22-25 (n=48)	25-above (n=13)	
Checking information available in package label or insert.							
Yes always	58(69.87%)	70(80.45%)	5(35.57%)	78(82.10%)	35(72.91%)	10(76.92%)	128(75.29%)
Yes, sometimes	18(21.68%)	14(16.09%)	3(21.42%)	21(22.10%)	6(12.50%)	2(15.38%)	32(18.82%)
No, never	5(6.02%)	9(10.34%)	1(7.14%)	4(4.21%)	7(14.58%)	2(15.38%)	14(8.23%)
Focusing point on package label or insert							
Brand or generic	35(42.16%)	39(44.83%)	2(14.28%)	42(44.21%)	23(47.91%)	7(53.84%)	74(43.52%)
Group of drug	15(18.07%)	17(19.54%)	2(14.28%)	21(22.10%)	7(14.58%)	2(15.38%)	32(18.82%)
Dose instruction	19(22.89%)	17(6.02%)	3(21.42%)	24(25.26%)	9(18.75%)	0(0.00%)	36(21.17%)
Therapeutic group	17(20.48%)	11(12.64%)	0(0.00%)	18(18.94%)	9(18.75%)	1(7.69%)	28(16.47%)
Date of manufacturing	43(51.80%)	50(57.47%)	4(28.57%)	60(63.15%)	22(45.83%)	7(53.84%)	93(54.70%)
Instruction	21(25.30%)	18(20.69%)	2(14.28%)	28(29.47%)	8(16.66%)	1(7.69%)	39(22.94%)
Other	2(2.40%)	0(0.00%)	0(0.00%)	1(1.05%)	0(0.00%)	1(7.69%)	2(1.17%)
Understanding of information available in package label or insert							
Fully understood	41(49.40%)	29(33.33%)	3(21.42%)	38(40.00%)	22(45.83%)	7(53.84%)	70(41.17%)
Partly understood	31(37.34%)	40(45.97%)	7(50.00%)	48(50.53%)	13(27.09%)	3(23.07%)	71(41.76%)
Don't understood	7(8.43%)	16(18.39%)	1(7.14%)	9(9.47%)	9(18.75%)	4(30.76%)	23(13.53%)
Checking expiry date before medicating.							
Yes	76(91.56%)	85(97.70%)	11(78.57%)	93(97.89%)	46(95.93%)	11(84.61%)	161(94.30%)
No	2(2.40%)	2(2.29%)	1(7.14%)	2(2.10%)	0(0.00)	1(7.69%)	4(2.35%)
Perception about self-medication practice.							
Good	9(10.84%)	12(13.79%)	4(28.57%)	10(10.53%)	6(12.50%)	2(15.38%)	22(12.94%)

Acceptable	35(42.16%)	46(52.87%)	6(42.85%)	51(53.69%)	19(39.58%)	5(38.46%)	81(47.64%)
Not acceptable	30(36.14%)	32(36.78%)	2(14.28%)	33(34.74%)	20(41.66%)	7(53.94%)	62(36.47%)
Reason for perceiving self medication as unacceptable							
Unsafe	30(36.14%)	34(39.08%)	2(14.28%)	33(34.74%)	21(43.75%)	8(61.53%)	64(37.64%)
Seldom effective	4(4.82%)	17(19.54%)	2(14.28%)	11(11.57%)	6(12.50%)	2(15.38%)	21(12.35%)
Adverse drug reaction	16(19.28%)	12(13.79%)	1(7.14%)	17(17.89%)	8(16.66%)	2(15.38%)	28(16.47%)
Side effects are likely	14(16.87%)	17(19.54%)	1(7.14%)	16(16.84%)	11(22.91%)	3(23.07%)	31(18.24%)
Other	5(6.02%)	2(2.30%)	0(0.00%)	4(4.21%)	2(4.16%)	1(7.69%)	7(4.11%)

Self medication pattern among pharmacy students regarding self medication

Similarly, figure revealed that most of them determined their dose of medicine by consulting with pharmacist (n=108, 63.54%). The study had shown (n=52, 30.58%) respondents faced side effect or adverse reaction. Stop taking the medicine (n=62, 36.47%) and consulting with pharmacist (n=70, 41.17%) were possible action to be taken after having adverse reaction or side effect among majority of respondent. Most of the respondent showed their belief in allopathic medicine system (n=114, 67.05%) for self medication while Ayurvedic medicine system (n=54, 67.05%) was also found to be emerging in the field of self medication practice.

Table No.7 Self medication pattern among pharmacy students

Variables	Gender		Age group				Total(n=170)
	Male (n=83)	Female (n=87)	16-19 (n=14)	19-22 (n=95)	22-25 (n=48)	25-above (n=13)	
Belief in system of medication.							
Ayurvedic	26(31.32%)	28(32.18%)	3(21.42%)	32(33.69%)	14(29.16%)	5(38.46%)	54(31.76%)
Homeopathic	6(7.22%)	10(11.49%)	3(21.42%)	6(6.31%)	2(4.16%)	3(23.07%)	16(9.41%)
Allopathic	56(67.46%)	58(66.66%)	6(42.95%)	71(74.73%)	30(62.50%)	7(53.84%)	114(67.05%)
Source of dose information							
By reading Package label	27(32.53%)	16(18.39%)	1(7.14%)	26(27.38%)	12(25.00%)	5(38.46%)	43(25.29%)
By consulting Pharmacist	45(54.21%)	63(72.41%)	8(57.14%)	66(69.47%)	28(58.83%)	6(46.15%)	108(63.54%)
By friends and family	13(15.66%)	10(11.49%)	3(21.42%)	14(14.73%)	6(12.50%)	1(7.69%)	23(13.53%)
Form newspaper,TV etc	4(4.82%)	5(5.74%)	1(7.14%)	5(5.26%)	2(4.16%)	1(7.69%)	9(5.29%)
Form previous experience	21(25.30%)	36(41.38%)	2(14.28%)	23(24.21%)	10(20.83%)	1(7.69%)	36(21.17%)
By self knowledge	19(22.89%)	9(10.34%)	1(7.14%)	15(15.78%)	11(22.91%)	1(7.69%)	28(16.47%)
By consulting doctor	4(4.82%)	6(6.89%)	2(14.28%)	5(5.26%)	2(4.16%)	1(7.69%)	10(5.88%)
Other	1(1.20%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(0.60%)

Any adverse or side effect on self medication							
No	50(60.24%)	61(70.11%)	5(35.71%)	67(70.52%)	28(58.33%)	11(84.81%)	111(65.29%)
Yes	27(32.53%)	25(28.73%)	3(21.42%)	29(30.53%)	17(35.41%)	3(23.07%)	52(30.58%)
Possible action after having adverse or side effect on self medication.							
Stop taking medicine	40(48.19%)	30(34.48%)	2(14.28%)	38(40.00%)	19(39.58%)	11(84.81%)	70(41.17%)
Switch to another medicine	3(3.61%)	2(2.30%)	0(0.00%)	4(4.21%)	0(0.00%)	1(7.69%)	5(2.94%)
Consulted with pharmacist	25(30.12%)	37(42.53%)	3(21.42%)	41(43.15%)	17(35.41%)	1(7.69%)	62(36.47%)
Consulted with family	2(2.41%)	4(4.60%)	2(14.28%)	4(4.21%)	0(0.00%)	0(0.00%)	6(3.52%)

Discussion

As observed in this study, headaches (52.35%), fever (55.29%), cough (47.06%), cold (41.17%) and diarrhoea (42.35%) were common indications for self medication following analgesic, antipyretic and anti-inflammatory, cough and cold ailment and GI disorder and infections. These results are consistent with several studies [19-23]. The observation of present study is accordance with Association of European Self Medication Industry which has enlisted pain, allergy, colds, sore throat, cough and diarrhoea as common diseases for preferring self medication [24]. A different observation was found by Badiger et al.[20] and reported sports injury, hangover and exam stress as major reasons for preferring self medication. In concordance with our study, Basir et al. [25] in India, Ibrahim et al. [29] in UAE and Pandya et al.[19] in Ahmedabad confirmed paracetamol and NSAIDs were most common drugs used for self medication. Considering high use of NSAIDs and paracetamol in self medication, it is to be noted that irrational use of such drug is associated with health complications like hepatotoxicity and nephropathy and demanded to be used rationally and responsibly [27, 28]. In term of antibiotic use, our finding (4.11%) was consistent as compared with Alay and Amel(4.8%)[29] but below than that of Periera et al.(32.9%)[30] and Elazz et al. (41%)[31].Low prevalence of antibiotics as self medication among undergraduate students can be perceived as appreciable practice as over and irrational antibiotic use may leads to bacterial resistance and possible toxicity.

Similarly, our study showed pharmacies and pharmacist as main source of obtaining their self medication. Also, major basis of selection specific medication and its dose were reported to be consultation and recommendation of pharmacist. This might signify close inter-relationship between undergraduate pharmacist and their profession, hence perceived to be common. Ibrahim et al. confirmed [30] this finding by reporting pharmacy (76%) as main source of obtaining drugs for self medication. In congruence to our study, Suruchi [22] also noted friends and family as major source of information for preferring self medication followed by chemist or pharmacist. It is worth noting that advertisement and internet were major factors motivating students selecting specific medicine for self medication which might be an indication of impact and influence of pharmaceutical industry and information technology among undergraduate students. Pharmacist's role is shifting from drug dispenser to member of multidisciplinary health care team. Accessibility of pharmacist to consumer is emphasized on optimization and promotion of rational self medication practice [3].

It is praiseworthy that majority (75.29%) always checked up the package information where major area focus was date of manufacturing .Almost all of them always checked the expiry date before medicating themselves. Also, most of them fully understood the information available in package label or insert. Rigorously reviewed information in all purchases with component of user friendliness, presence of wide range of education and intellectual capacity are some of the parameters on safety in self medication [19].

Few students considered self medication as good practice while considerable proportion perceived it as unacceptable. Being unsafe and adverse drug reaction were main reasons supplied by the students on defending its denial. Danger implications associated with increasing or decreasing dose of drug and adverse reaction were main reason of disapproval of the concept of self medication. This findings can't be overlooked as OTC drugs occupy significant position in pharmacy practice [30]. Students were more likely to refer allopathic system though traditional system is also exploring its area in self medication practice which is in accordance with the findings of Ali et al [32]. Similarly, stop taking medicine and preceding pharmacy consultation would be their possible steps if they received adverse reaction or side effect which exhibit genuine attitude of pharmacy students regarding rational self medication practice.

Conclusions

Responsible self medication is an indispensable part of self care and signifies sound medical culture among pharmacy students. It is required to have sufficient professional exposure and knowledge regarding pharmacology and rational selection of drug, its dose, side effect and adverse reaction on over dose among pharmacy undergraduates for rational self medication practice. Antipyretic, analgesic, anti-inflammatory, cough and cold ailments and GI disorder ailments were common for the treatment of fever, headaches, cough, cold and GI disorders and infections. Further, close interrelationship between pharmacy undergraduates and their profession was explored while assessing their attitude, behaviour and practice on self medication. Strong revision on teaching method on clinical pharmacology and rational practice is recommended since significant proportion perceived self medication practice as unacceptable.

Competing interests

The authors declare there is no any conflicting interest.

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