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A Survey on Over The Counter Drug usage in the Community

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ABSTRACT

Background: The incidence of usage of over the counter (OTC) drugs is drastically increasing day by day. Over the counter drugs are medicines sold directly to consumer without a prescription from health care personnel. In many countries, OTC drugs are selected by a regulatory agency to ensure that they are safe and effective when used without physicians care.

Objective: The study was designed to carry out a survey on over the counter (OTC) drug usage in the community.

Methodology: A prospective and community based study was carried out over 6 months of period. A validated questionnaire was used for the collection of data, given to a total of 774 persons and face to face interviews among the 774, aged 14-84yrs.

Results: A total of 750 participants were enrolled in the study. A significant proportion of the participants identified as practicing self-medication in our study were found to be 77.33%. The majority of self-medication practice was found to be among the age of 14-24 yrs. In our study, number of females (54.83%) reported use of OTC products more in comparison to males (44.66%). Majority of participants used OTC drugs for fever (31.551%), headache (30%) and Sore throat /cough/common cold (17.931%). The most commonly used drug as self-medication was Paracetamol (66.103%), Cetirizine (6.55%), and Meftal spas (4.65%). Anti-pyretics/pain relievers (37.41%) were the most commonly used class of drug. The most common reason for self-medication was easy accessibility (21.55%). The most relevant source of information was friends/relatives (27.41%). 52.93% of participants altered dose/frequency of the medication according to their health condition. Out of 580 participants, 108 (18.62%) experienced side effects from OTC drugs in which 21 reported side effects.

Conclusion: We concluded that majority of participants practiced self-medication. The most commonly used drug was Paracetamol and the most common indication for self-medication was fever. Easy accessibility was the most common reason and source of information was friends/relatives. Awareness and dangers of misuse of OTC medications among all participants was less. Therefore it is suggested that proper education should be imparted regarding illness where self-administration of OTC drugs to be employed.

Key words: Self-medication, over the counter, questionnaire, survey, awareness.

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INTRODUCTION

OTC medicines are defined as drugs that are safe and effective for use by the general public without a prescription. These drugs are often located on shelves in pharmacies with easy access by patients, but may also be located in non-pharmacy outlets, such as grocery stores, convenience marts. OTC medications are effective in treating common ailments, and it helps the patients to select safe, effective product. Globally, self-medication has been reported as being on the rise. People around the world tend to treat the disease, almost 50% either wait for the problem to run its course or use a home remedy. About 25% visit a doctor or use prescription medicine previously obtained for the same condition. The remaining 25% turn to the OTC medicines. The global increase in the consumption of the medicines needs for studying medication knowledge and behaviour. Medication knowledge assessment is used to assess a person's knowledge and ability to read and understand information necessary for appropriate medication use[1,2].

Safety depends on using a drug properly. For OTC drugs, proper use often relies on consumer self-diagnosis, which leaves room for error. For e.g., most headaches are not dangerous, but in rare cases, a headache is an early warning of a brain tumour or haemorrhage. Similarly, what seems like severe heartburn may signal an impending heart attack. Ultimately, people must use common sense in determining when a symptom or ailment is minor and when it requires medical attention and consult a doctor if they are unsure[3,4].

Aim

✓ To carry out a survey on over the counter drug usage in the community.

Objectives

Primary objective:

✓ To carry out a survey for the evaluation of pattern of over the counter drug usage in the community.

Secondary objective:

- ✓ To assess the self-medication practice in the public.

- ✓ To assess the common types of illness in which the over the counter drugs are being used.

- ✓ To rule out the most commonly used over the counter drugs in both genders.

- ✓ To create awareness among the public regarding the use of over the counter drugs.

- ✓ To create a rapport between community pharmacist and people in providing information about over the counter (OTC) medications.

MATERIALS AND METHODS

Study period:

A study was conducted for a period of 6 months.

Study design:

This is a prospective, observational and community based study.

Site of study:

Bengaluru, Karnataka, India.

Study criteria:

Inclusion criteria

- ▪ Participants of age of 14 and above, both male and female.

- ▪ Usage of over the counter drugs in the past 06 months.

Exclusion criteria

- ▪ Participants below the age of 14 yrs.

- ▪ Participants who have been prescribed with over the counter drugs by the doctor for long term use.

- ▪ Participants who are not willing to give consent.

RESULTS

Table 1: Distribution of study population by age and gender

Age category	Male N=354 (%)	Female N=396 (%)
14-24	150 (20)	235 (31.33)
25-44	65 (8.67)	68 (9.07)
45-64	71 (9.47)	71 (9.47)
>64	65 (8.67)	20 (2.67)
Unresponsiveness	3 (0.40)	2 (0.27)

(*N= Population*)

Highest % of participants (51.33%) is found in the age category of 14-24 yrs. Lowest % of participants (11.34%) is found in the age group >64yrs.

Table 2: Distribution of study population by educational status and self-medication

Education status	No. of people n=580 (%)
Graduate	263 (36.55)
Secondary	149 (21.21)
PG	105 (16.03)
Intermediate	75 (8.79)
Diploma	68 (7.59)
Doctorate	34 (5.52)
Primary	30 (2.41)
Illiterate	10 (0.69)
Unresponsiveness	16 (1.21)

(*n=sample size*)

Highest % of participants self-medicated is found among graduates (36.55%) followed by secondary (21.21%), PG (16.03%), intermediate (8.79%), diploma (7.59%), doctorate (5.52%), primary (2.41%) and illiterate (0.69%) respectively.

Table 3: Distribution on total number of participants self medicated (including unresponsiveness)

Age category	No. of people self medicated n=580 (%)	Male n=260 (%)	Female n=320 (%)
14-24	332 (57.24)	128 (22.07)	204 (35.17)
25-44	102 (17.59)	48 (8.28)	54 (9.31)
45-64	101 (17.41)	55 (9.48)	46 (7.93)
>64	42 (7.24)	28 (4.83)	14 (2.41)
Unresponsiveness	3 (0.52)	1 (0.17)	2 (0.34)

(*n=sample size*)

Highest % of self- medication practice is found in the age group of 14-24 (57.24%) out of which 22.07% is male and 35.17% is female.
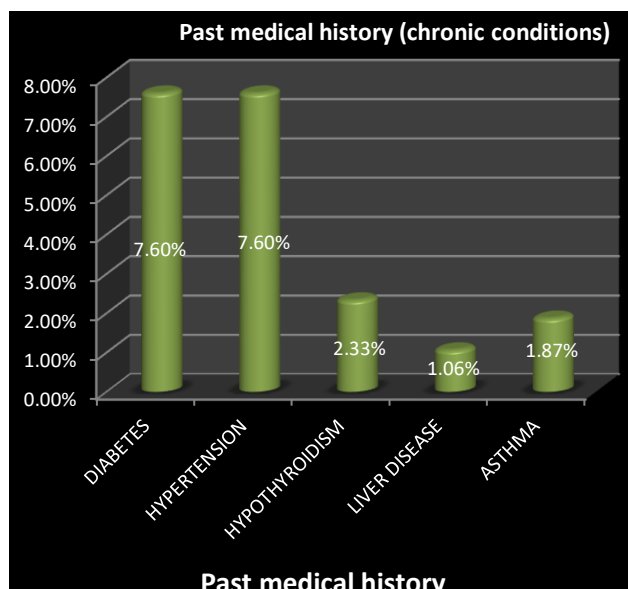
Figure 1: Past medical history of the study population

7.6% had a history of diabetes & Hypertension, 2.133% had a history of hypothyroidism, 1.866% had a history of asthma and 1.066% had a history of liver disease.

Table 4: Past medication history of study population

Past medication history	No. of people N=750 (%)
Metformin	28 (3.733)
Amlodipine	22 (2.933)
Thyronorm	13 (1.733)
Insulin	9 (1.2)
Anti-asthmatic inhalers	7 (0.933)
Olmesartan	5 (0.666)
Glimepiride	5 (0.666)
Losartan	5 (0.666)
Telmisartan	3 (0.4)
Montelukast	2 (0.266)

(N=Population size)

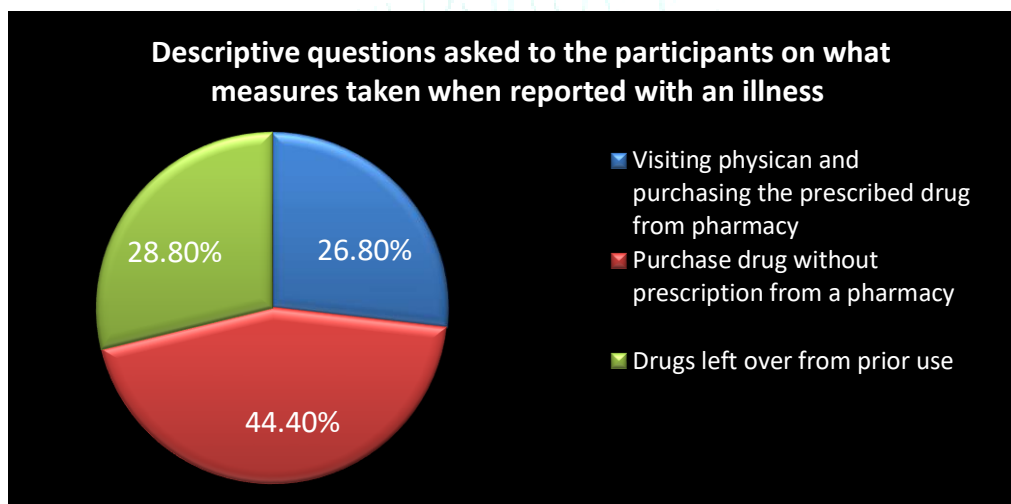The highest % is found to be Metformin (3.733%); lowest % is Montelukast (0.266%).

Figure 2: Descriptive questions asked to the participants on what measures taken when reported with an illness

44.4% purchased drug without prescription from a pharmacy, 28.8% used drugs which was left over from prior use and 26.8% visited physician and purchased the prescribed drug from pharmacy.

Table 5: Distribution on total number of participants self medicated

| Response	No. of people N=750 (%)	
Yes	580 (77.33)	**P VALUE <0.001**
No	170 (22.67)	

(N=Population size)

77.33% practiced self- medication, 22.67% did not practice self-medication.

**Table 6: Distribution on duration of OTC medications taken in the past 6 months**

Duration	No. of people n=580 (%)
<A week	278 (47.93)
>A month	134 (23.10)
A week	73 (12.59)
A month	62 (10.69)
Once in 15 days	33 (5.69)

(n=Sample size)

47.93% of participants treated themselves with OTC medication for <a week followed by 23.10% for >a month, 12.59% for a week, 10.69% for a month and 5.69% for once in 15 days.
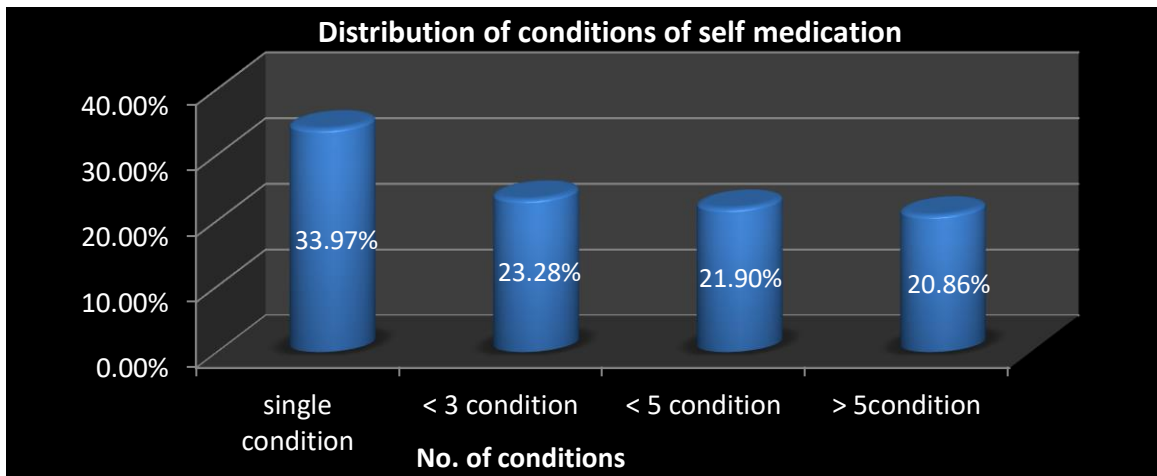
Figure 3: Distribution on conditions of self medication

33.97% used OTC drugs for single condition, 23.28% used OTC drugs for < 3 conditions, 21.90% for <5 conditions and 20.86% for > 5 conditions.
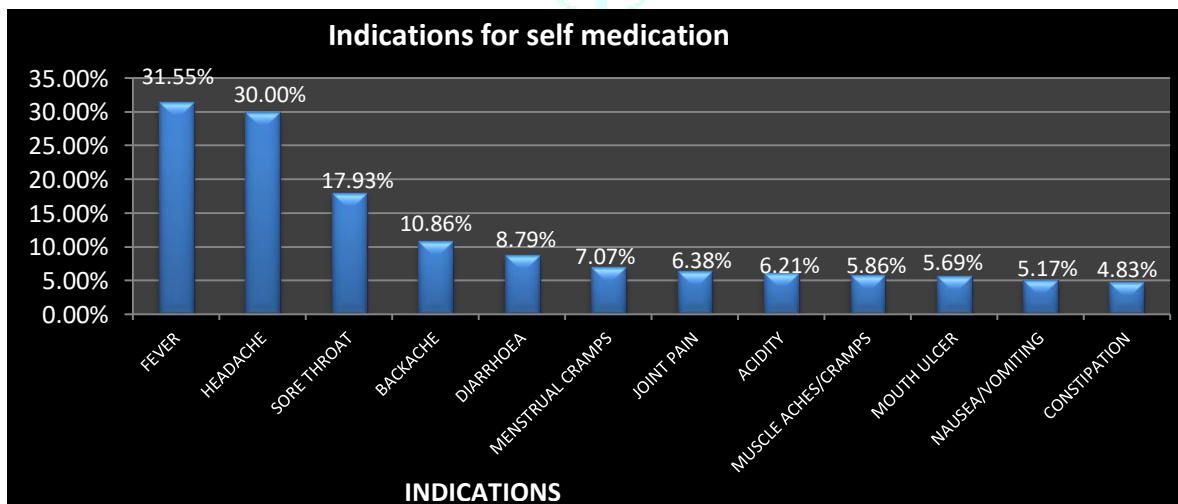
Figure 4: 12 Most common indications for self-medication

Highest % of indication for self -medication is found to be fever (31.551%).

Table 7: Distribution of participant's knowledge on name of self-medicated drug

Response	No. of people n=580 (%)
Yes	434 (74.83)
No	146 (25.17)

(n=Sample size)

Table 8: Distribution on pattern of drug use

Drugs	No. of drugs n=580 (%)
Single Drug	280 (64.45)
< 3 Drugs	97 (22.35)
< 5 Drugs	43 (9.91)
> 5 Drugs	14 (3.23)

Table 9: Most commonly used OTC medications

Drugs for self medication	No. of people responded n=580 (%)
Paracetamol	366(63.103)
Cetirizine	38(6.551)
Meftal Spas	27(4.655)
Azithromycin	21(3.620)
Eldoper	17(2.931)
Pantoprazole	14(2.413)
Cold act	13(2.241)
Vitamin B Complex	11(1.896)
Ibuprofen	10(1.724)
Diclofenac	9(1.551)
Imol Plus	5(0.862)

In our study, Paracetamol (63.103%) was the most common drug taken followed by Cetirizine (6.55%) followed by Meftal spas (4.65%), Eldoper (2.931%), Pantoprazole (2.413%).

Table 10: Distribution of banned drugs

Brand name	No. of drugs (%)
Saridone	14 (2.413)
Benadryl	8 (1.38)
Dart	6 (1.034)
Cheston cold	3 (0.517)
Vasograin	3 (0.517)
Sinarest	2 (0.344)
C cold	2 (0.344)
D cold	2 (0.344)
Sumo	2 (0.344)
Ascoryl	1 (0.172)
Benadryl	1 (0.172)
Wikoryl	1 (0.172)
Zeecold	1 (0.172)
Crocin advance	1 (0.172)
Vicks action 500	1 (0.172)
Fludrex	1 (0.172)
Zincold plus	1 (0.172)
Nicip cold and Flu	1 (0.172)

8.613% of banned drugs were found among the OTC drugs in our study. Saridone (2.413%) was the most commonly used banned drug and Nicip cold and Flu (0.172%) was the least used.

Table 11: Distribution on pattern of frequently used self-medication

No. of drugs	No. of people n=580 (%)
Single drug	280 (64.45)
< 3 drugs	97 (22.35)
< 5 drugs	43 (9.91)
> 5 drugs	14 (3.23)

(n=Sample size)

64.45% used single drug, 22.35% used <3 drugs, 91% used <5 drugs, 3.23% used >5 drugs.

Table 12: Distribution on frequently used class of drug

Class of drugs	No. of people n=580 (%)
Pain relievers/Anti-pyretics	271 (37.413)
Cough/Cold/Allergy remedy	181 (31.206)
Anti-biotics	71 (12.241)
Ointments	70 (12.068)
Gastro intestinal drugs	54 (9.310)
Vitamins/minerals	51 (8.793)
Eye/Ear care drugs	22 (3.793)
Sleeping pills	6 (1.034)
Family planning drugs	4 (0.68)
Others	25 (4.31)

Anti-biotics (12.241%) were the most commonly used class of drug and family planning drugs (0.68%) were the least used.

Table 13: Distribution on reasons for self medication

| Reasons	No. of people n=580 (%)
Easy accessibility	125 (21.55)
Self confidence	100 (17.24)
Time saving	93 (16.03)
No enough time for consultation	41 (7.07)
Safe and well tolerated	33 (5.69)
Low cost	19 (3.28)
Lack of trust in doctors	9 (1.55)
Multiple reasons	160 (27.586)

(n=Sample size)

The reason for self- medication was found to be highest in easy accessibility (21.55%) followed by self-confidence (17.24%), time saving (16.03%), no enough time for consultation (7.07%), safe and well tolerated (5.69%), low cost (3.28%), lack of trust in doctors (1.55%) and multiple reasons (27.586%).

Table 14: Distribution on participant's source of information

Source	No. of people n=580 (%)
Friends/ relatives	159 (27.41)
Pharmacist	96 (16.55)
Doctors	80 (13.79)
Online	74 (12.76)
Media	15 (2.59)
Multiple options	156 (26.90)

Source of information accounts for 27.41% among friends/relatives, 16.55% among pharmacist, 13.79% among doctors, 12.76% by online, 2.59% by media and 26.90% for multiple options.
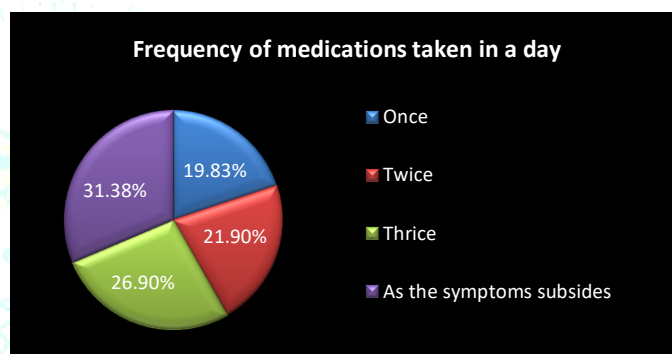
Figure 5: Distribution on frequency of self medications taken in a day

31.38% of people took OTC medications as the symptom subsided, 26.90% took thrice in a day, 21.90% took twice in a day and 19.83% took once in a day.

Table 15: Distribution on alteration of dose/frequency of the medications according to the health condition

Response	No. of people n=580 (%)	
Yes	307 (52.93)	**P VALUE=0.158**
No	273 (47.07)	

52.93% of participants altered the dose/frequency of the medication according to their health condition and 47.07% did not alter the dose/frequency.

Table 16: distribution of time participants discontinue the medications

Situations	No. of people n=580 (%)
After symptoms disappear	354 (61.03)
A few days after the recovery	106 (18.28)
After a few days regardless of the out come	77 (13.28)
Others	18 (3.10)
Unresponsiveness	15 (2.59)
After medications ran out	10 (1.72)

61.03% of people discontinued the medication after symptoms disappeared, 1.72% discontinued after medications ran out

Table 17: Distribution on number of participants experienced side effects from OTC drugs

Response	No. of people n=580 (%)	
Yes	108 (18.62)	**P value <0.001**
No	472 (81.38)	

18.62% of participants experienced side effects from OTC drugs and 81.38% of people did not experience any side effects.

Table 18: Reported side effects

Reported side effects	No. of people n=21 (%)
Headache	4 (3.703)
Rashes/Skin Allergy	3 (2.777)
Sleepiness/Dizziness	3 (2.777)
Tremor	3 (2.777)
Acidity	2 (1.851)
Stomach Upset	2 (1.851)
Back Pain	1 (0.925)
Giddiness ,Hair loss	1 (0.925)
Nausea, vomiting	1 (0.925)
Slight Itching	1 (0.925)

19.44% participants reported side effects out of which 3.703% experienced headache followed by 2.777% experienced rashes/skin allergy, sleepiness/dizziness, tremor, 1.851% experienced acidity, stomach upset, 0.925% experienced back pain, giddiness, hair loss, nausea/vomiting and slight itching.

Table 19: Distribution on participant's knowledge about food/drug/disease interaction

Response	No. of people n=580 (%)	
Yes	148 (25.52)	
No	195 (33.62)	**P VALUE = 0.011**
Unresponsiveness	237 (40.86)	

25.52% of participants are aware that certain medications can interact with food/drug/disease condition and 33.62% are not aware about it.

Table 20: Distribution on perceived effectiveness from OTC medications

RESPONSE	NO. OF PEOPLE n=580 (%)	
YES	526(90.69)	**P VALUE <0.001**
NO	54(9.31)	

90.69% of participants got relief from the symptoms for which they bought medication, and 31% did not get relief from the symptoms for which they bought medication.

Table 21: Participant claims for checking label/expiry date on OTC medications

	Yes	No	Unresponsiveness	
Expiry date n=580(%)	506 (87.24)	74 (12.76)	00 (0)	P VALUE <0.001
Label of medication n=580 (%)	439 (75.69)	135 (23.28)	6 (1.03)	P VALUE <0.001

Results showed that 87.24% of participants check the expiry date and 75.69% check for label of medication.

Table 22: Participants knowledge on whether the medications they bought need a valid prescription or not

Response	No. of people n=580 (%)	
Yes	191 (32.93)	P VALUE <0.00001
No	318 (54.83)	
Unresponsiveness	71 (12.24)	

32.93% of participants are aware that the medications they bought needs a valid prescription and 54.83% are not aware.

Table 23: Participant's belief on effectiveness of OTC medicines compared to those prescribed by the doctor

Response	No. of people n=580 (%)
Moderately	282 (48.62)
More	217 (37.41)
Less	81 (13.97)

48.62% of participants believed that OTC medications are moderately effective as those prescribed by the doctor, 37.41% more and 13.97% less effective as prescribed by doctor.

**Table 24: Propensity to ask a medical doctor for advice on OTC medications**

Response	No. of people n=580 (%)	
Yes	504 (86.90)	P VALUE <0.001
No	76 (13.10)	

86.90% of participants inform doctor about OTC medication and 13.10% did not inform doctor about the medications they used.

Table 25: Participant's knowledge on combining herbals/ homeopathic medications along with allopathic medications

Response	No. of people n=580 (%)	
Yes	164 (28.28)	P VALUE <0.001
No	416 (71.72)	

28.28% of participants combine herbals or homeopathic medications along with allopathic medications.
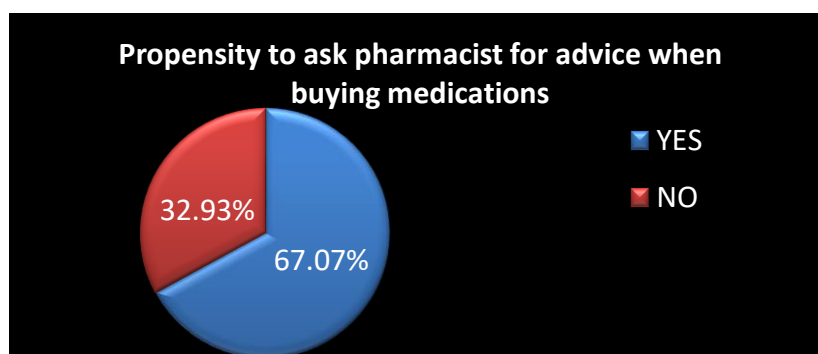
Figure 6: Propensity to ask pharmacists for advice when buying OTC medications

67.07% of participants gathered information before buying medications from the pharmacist.

Table 26: Participants who received advice from pharmacist regarding OTC medications

Response	No. of people n=580 (%)	
Yes	274 (47.24)	**P VALUE=0.184**
No	306 (52.76)	

47.24% of participants said that the pharmacist gave instructions for the OTC medications they bought.

Table 27: Participants who discuss their symptoms with a pharmacist before buying OTC medications

RESPONSE	NO. OF PEOPLE n=580 (%)	
YES	299(51.55)	P VALUE=0.455
NO	281(48.45)	

51.55% of the participants discuss about their symptoms to be treated with a pharmacist before buying medication.

DISCUSSION

During the study period of 6 months, a total of 774 participants were included in the study. 175 data were collected through Google forms and 599 through questionnaire form. Out of 774 participants enrolled, 24 were excluded due to exclusion criteria. Out of 750 (N= population size) valuable data obtained, 77.33% (n=580) practiced self-medication and 22.67% (170) did not practice self-medication. Out of 750 participants enrolled, the overall age group of participants ranged from 14-90 years old. In 14-24 yrs. of age group 150 (20%) were male and 235 (31.33%) were female, in 25-44 yrs of age group 65 (8.67%) were male and 68 (9.07%) were female, in 45-64 yrs. of age group 71 (9.47%) were male and 71 (9.47%) were female and in > 64 yrs of age group 65 (8.67%) were male and 20 (2.67%) were female. 5 (0.67%) did not respond to the question. Highest % of participants (51.33%) is found in the age category of 14-24 yrs. and lowest % of participants is found in the age group >64 yrs.

Out of 580 participants self-medicated, the highest % of self-medication was found among graduates 263 (36.55%) followed by secondary 149 (21.21%), PG 105 (16.03%), intermediate 75 (8.79%), diploma 68 (7.59%), doctorate 34 (5.52%), primary 30 (2.41%) and illiterate 10 (0.69%). Education status was not stated by 16 (1.21%) participants. In our study, proportion of females (35.17%) reported use of OTC products more in comparison to males (22.07%) in the age group of 14-24 years. In 25-44 yrs of age group proportion of females (9.31%) reported use of OTC products more than males (8.28%), in 45-64 yrs. of age males (9.48%) reported OTC consumption more than females (7.93%) and in >64 yrs of age proportion of males (4.83%) reported more than females (2.41%). Gender was not stated by 0.52% of participants.

Among 750 participants, only the chronic conditions of past medical history were taken in to consideration. 7.6% had a past medical history of diabetes mellitus, 7.6% had hypertension, 2.133% had hypothyroidism, 1.066% had liver disease and 1.866% had a history of asthma. The most commonly used past medication for the above conditions were found to be Metformin (3.733%), Amlodipine (2.933%), Thyronorm (1.733%), Insulin (1.2%), anti-asthmatic inhalers (0.933%), Olmesartan (0.666%), Glimepiride (0.666%), Losartan (0.666%), Telmisartan (0.4%) and Montelukast (0.266%). 44.4% purchased drug without prescription from a pharmacy, 28.8% used drugs which were left over from the prior use and 26.8% visited physician and purchased the prescribed drug from pharmacy when reported with an illness. From the above data, 73.2% of participants purchased drug without a valid prescription. So, we assessed that participants of our study preferred self-medication over prescribed drugs. The overall prevalence of self-medication was 77.33% (p value= <0.001) in the past 6 months. 47.93% of participants treated themselves with OTC medications for < a week, 23.1% > a month, 12.59% for a week, 10.69% for a month and 5.69% for once in 15 days.

We assessed that 33.97% used OTC drugs for single ailment, 23.28% for <3 ailments, 21.9% for <5 ailments and 20.86% for >5 ailments. In the last 6 months, they faced different ailments in which the most common are taken to the consideration: 31.55% fever, 30% headache, 17.93% cough/common cold/sore throat, 10.86% backache, 8.79% diarrhoea, 7.068% menstrual cramp, 6.37% joint pain, 6.206% acidity, 5.86% muscle ache/cramp, 5.68% mouth ulcer, 5.17% nausea/vomiting and 4.827% constipation. In our study 31.55% used OTC products for fever. Study in coastal south India [5] shows fever was the most common reason for self-medication. 74.83% of participants were aware about the name of the self-medication (p value=<0.001). 25.17% participants had difficulty in recalling the name of the medication used. In 74.83%, 64.45% used only one drug as OTC, 22.35% used <3 drugs, 9.91% used <5 drugs and 3.23% used >5 drugs. In our study Paracetamol (63.103%) was the most common drug taken. Anti-pyretic were the most common class of drugs self-medicated by majority of participants in the previous study, similar observations were made in a study from South India and Ethiopia [6,7]. The second most commonly used drug was Cetirizine (6.55%) followed by Meftal spas (4.65%), Eldoper (2.931%), Pantoprazole (2.413%), Saridone (2.413%), Coldact (2.241%), Vitamin B complex (1.896%), Ibuprofen (1.724%), Diclofenac (1.551%) and Imol plus (0.862%). In our study about 3.62% participants had taken anti-microbial considering it as an OTC product. Most commonly used anti-microbial was Azithromycin (3.62%).

Among 74.83% of those self-medicated drugs, 8.613% were banned in India. 2.413% of respondents mentioned Saridone followed by 1.38% of Benadryl, 1.034% of Dart, 0.517% of Cheston Cold and Vasograin, 0.344% of C Cold, D Cold, Sinarest, and Sumo Cold. About 0.172% of the respondents used Ascoryl, Wikoryl, Zeecold, Crocin Advance, Vicks Action 500, Nicip Cold and Flu, Fludrex and Zincold plus respectively. These fixed dose combination (FDC) drugs used to treat headache, fever, cough, common cold and allergies were banned by the Government of India due to lack of

"therapeutic justification." In frequently used medications, 66.45% used single class of drug, 22.35% used <3 class of drugs, 9.91% used <5 class of drugs and 3.23% used >5 class of drugs. Our study revealed that the most commonly used class of drug is pain relievers (37.41%) and the least common was family planning drugs (0.68%).

In our survey, it was found that the most common reason for self-medication was easy accessibility (21.55%) followed by self-confidence (17.24%), time saving (16.03%), no enough time for consultation (7.07%), safe and well tolerated (5.69%), low cost (3.28%) and the least reason was lack of trust in doctors (1.55%). Multiple reasons account for about 27.59%. The most relevant sources of information were friends/relatives (27.41%) followed by pharmacist (16.55%), doctors (13.79%), online (12.76%) and media (2.59%). Multiple options account for about 26.9%. Our study revealed that majority of participants relied on friends/relatives for self-medication. We assessed that 31.38% of participants took OTC medications as the symptoms subsided, 26.9% took thrice in a day, 21.9% took twice in a day and 19.83% took once in a day. 52.93% of participants altered dose/frequency of the medication according to their health conditions (p value=0.158).These findings suggest that most of them used OTC medications just to suppress symptoms. Most of the participants lack the knowledge of the dose and frequency of the drug. These finding suggest that participants have the knowledge of the drug name but the drug administration part was lacking. Majority of the participants took OTC medications till their symptoms subsided which depicts the irrational usage of OTC medications that may lead to accidental drug poisoning.

Among 580 valid data obtained, 61.03% participants discontinued the OTC medication after the symptoms disappeared, 18.28% a few days after their recovery, 13.28% after a few days regardless of the outcome, 1.72% after medications ran out and 3.1% for other situations. 2.59% of participants did not state the situations. Out of 580 participants, 108 (18.62%) experienced side effects from OTC drugs and 472 (81.38%) did not experience any side effects. Out of 108, only 21 reported side effects while the remaining did not mention the side effects. Almost 3.703% had experienced headache, 2.777% experienced rashes/skin allergy, sleepiness/dizziness and tremor respectively, 1.85% experienced acidity, stomach upset respectively, and 0.925% experienced back pain, giddiness/hair loss, nausea /vomiting and slight itching respectively. Majority of the participants were unaware that the OTC medications can cause side effects which made them believe that self-medication was safe. 25.52% of participants were aware that certain medications can interact with their food/drug/disease condition while 33.62% were unaware about it (p value=0.011). Majority of the participants did not have any idea about interaction and what it really means. 40.86% did not state their response. 90.69% participants got relief from the symptoms after using the OTC medication while 9.31% did not get any relief from their symptoms. Majority of the participants felt that OTC drug improved their illness.

Only 87.24% of participants check for the expiry date before using any OTC drugs, whereas 12.76% did not check expiry date and 75.69% of participants read the label content of drugs whereas 23.28% did not.1.03% of participants did not respond. In our study 32.93% were aware that the medication they bought needs a valid prescription and 54.83% were not aware about it. 12.24% did not state their response. 48.62% of participants believed that OTC medication are moderately effective as those prescribed by the doctor, 37.41% more and 13.97% less effective as those

prescribed by the doctor. Majority of the people believed that self- medication was moderately/more effective than those prescribed by the doctor which showed us that they were self -confident and believed that it causes no harm. Our study revealed that 86.9% of participants informed doctor about their OTC medications while 13.1% did not (p value=<0.001). 28.28% participants combined herbals or homeopathic medicines along with allopathic medicines but 71.72% did not combine the medications (p value=<0.001). It is recommended not to take both allopathic and herbals/homeopathic medicines for the same disease conditions as it masks the effect and the doctor cannot say which medicines helped to cure the disease.

Out of 580 participants, 389 (67.07%) gathered information before buying medication from the pharmacist whereas 191 (32.93%) did not gather any information on medication (p value=<0.001). 47.24% of participants reported that the pharmacist gave instructions for the OTC medications they bought but 52.76% did not receive any instructions (p value=0.184). Almost 51.55% of participants discussed about their symptoms to be treated with a pharmacist before buying medications and 48.45% of them did not discuss with the pharmacist about their symptoms (p value=0.455). In most developing countries drug information given by pharmacist is not yet optimal. In addition, pharmacy personnel tend to businessman rather than professional. Pharmacists have a professional responsibility to provide sound, unbiased advice and to ensure that self-medication is resorted to only when it is safe and appropriate to do so. The pharmacist is ideally qualified and placed to advice on the need to consult a prescriber and that advice, because it will be based on expert knowledge, is bound to be better and safer than advice given by a friend or member of that person's family. Pharmacists have the necessary knowledge to advice on safe storage of medicines in the home and on safe disposal of medicines once a course of treatment has been completed or, in the case of a medicine, which is obtained for occasional use, when the expiry date has been reached. Majority of the participants believed use of OTC drug is a good practice, is indeed a great concern to the society because participants are not aware which drugs to be taken for which indication, what is the ideal duration for the drugs, what is the dose regimen of the drugs and when to stop the drugs. Excessive use of non OTC drugs as OTC can lead to extra burden of cost, development of résistance and exhaustion of drug reserves.

CONCLUSION

A significant proportion of the participants identified as practicing self-medication in our study were found to be 77.33%. The majority of self-medication practice was found to be among the age of 14-24 yrs. In our study, number of females reported use of OTC products more in comparison to males. Majority of participants used OTC drugs for fever, headache and Sore throat /cough/common cold. The most commonly used drug as self-medication was paracetamol, Cetirizine, and Meftal spas etc. Anti-pyretics/pain relievers were the most commonly used class of drug. In our study we found that easy accessibility was the most common reason for self-medication. The most relevant source of information was friends/relatives and media was the less trusted source.

An adequate counseling was carried out to these participants to improve their self- medication practice and made them understand how it will reflect in their quality of life and in better management of the disease. Therefore, as a clinical pharmacist, an ideal person who can contribute to better patient outcome by being the member of healthcare team, we were able to give specific counseling to each

participant and educate them about their present disease conditions, self -medication and the lifestyle modification, thereby helping them to achieve a better healthcare outcome.

We concluded that awareness and dangers of misuse of OTC medications among all the participants was little. Therefore it is suggested that proper education should be imparted regarding illness where self administration of OTC drugs to be employed. General practitioners should consider regularly asking their patients about their use of OTC medications, in order to establish prior care and possible side effects. The result showed that they are still lacking the concept of over the counter drugs, consultation of doctor before using the OTC drugs, its adverse effects, disease to be treated and caution to be taken in order to control this prevailing problem, legislation are to be made by the government especially to implement and facilitate the prescription system, conducting awareness programs and restricting drug advertisements for public. Therefore, it is suggested for awareness program among community people conducted at community level regarding over the counter (OTC) drugs.

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CONFLICTS OF INTEREST

The author declares that there is no conflict of interest to disclose.

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