

Original Research Article

Survey on common trends for non-prescribed medication use among the young generation in Dhaka, Bangladesh: A cross sectional study

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ABSTRACT

Background: Use of drugs without prescription is a worldwide phenomenon especially among the general people in the developing countries. Alarming the use of medication without prescriptions among the young generations for longer duration is increasing day by day. The study was meant to evaluate the prevalence of non-prescribed medications among the young generations living in the capital of Bangladesh.

Methods: It was a cross-sectional survey conducted in the Dhaka South City Corporation (DSCC) from September-November, 2019. Data was collected from patients having self-administration of drugs with semi-structured questionnaire in English and analysed applying descriptive statistics.

Results: The study revealed the occurrence of non-prescription medication use among 75% of the respondents (N=400). The participants were students (67%), service holder (19%) and housewife (9%). Male and female were 49% and 51%; aged between 15-35 years (average 25.8 years). Mostly used medication groups were NSAIDs (34%), antacids (24%) and antibiotics (17%). Duration was more than one year 206 (69%) and from six to twelve months 94 (31%). The compliance reported as better (62.33%) and extremely good (34.33%). The crucial diseases treated were fever (27.73%), gastric acidity (22.13%), headache and other pains (15.13%), dysentery and diarrhea (8.68%) and allergy (8.40%). Interestingly 42% participants suggested their medication to others.

Conclusions: In the young generation occurrence of non-prescribed medication is highest amidst the students. The authority should assure rational use of medications. The DGDA may campaign against the haphazard use of medicines involving the young generations.

Keywords: Bangladesh, DSCC, Non-prescribed medicine, Young generations

INTRODUCTION

Now a days non-prescribed medicines (medicines without prescription) are used worldwide as a common practice to prevent or treat minor sickness as well as maintain physical fitness is a tendency practiced worldwide particularly in the developing countries like Bangladesh and is associated with the standard of living, education, social status and financial conditions.^{1,2}

Generally, the practice of non-prescribed medicine is known as self-medication which is the taking of drugs, herbs or home remedies on one's own initiative, or on the advice of another person, without consulting a doctor.³ Being cost effective and free of doctor's involvement, self-medication widens the possibility of inverse drug reactions and other complications due to wrong choice of drugs by the patient.^{4,5} For the young generations, self-medication can be regarded as their aspiration to play an intelligent, independent and informed role in the

management of diseases as well as therapeutic activities.^{3,6} In Bangladesh prescription only medicines are freely because the drugstore salespersons are often associated in selling drugs without prescription, they also recommends drugs to the patients.^{7,8}

Dhaka is one of the densely populated megacities in the world where about 12.043977 million people lived in 2011 and it is estimated that, about 19 million people is currently living in Dhaka city.¹¹ A large portion of these populations are the young generations. Dhaka city is subdivided into north and south city corporations. The use of non-prescribed medications among the young generations is particularly important because the future of the country depends on healthy citizens.⁹

Purpose

In that connection the present study was designed to find out the trends of non-prescribed medication use amongst the young generations living in Dhaka south city corporation.

METHODS

Survey area

This study was conducted in Dhaka north and south city corporation, part of the capital city Dhaka, Bangladesh. The locations for data collection were selected based on convenience and availability of the target population.

Study design and sample collection

It was a cross-sectional study conducted in September-November, 2019 under the supervision of principal investigator Md. Imran Nur Manik, lecturer, department of pharmacy, Northern University Bangladesh (NUB), Dhaka-1205, Bangladesh. To conduct the survey a standard semi-structured questionnaire was prepared in English based on literature search, by the principal investigator. The questions were focused on the medication type, disease, duration of use and other related things. Three (03) surveyors, working as lecturer at the Department of Pharmacy, NUB was involved in the data collection. All of them were assigned to collect data from 140 respondents, along with their written consent. Total number of responses collected was 420 among them 400 (95.238%) was accurately filled. Hence the final collected sample size was 400.

Data were collected from the patients based on age group and selected randomly upon their interest to participate in the study, by directly asking them about their medication use without prescriptions.

Inclusion criteria

The resident of DSCC (Dhaka South City Corporation) who are living in Dhaka for more than three years aging

from 15 years and above (young to adults); can understand the term non-prescription drugs upon explanation from the surveyor in native language and who are preferably university students or service holders as well as educated female respondents were included as the survey respondents.

Exclusion criteria

To avoid the misconstrue due to age, location and occupation the respondents who were below 15 years, nonresident of DSCC or visitors with short duration of living in Dhaka; who have poor understanding of prescriptions and self-drug administrations and who are uneducated or solely school going students were excluded from the study.

The willingly participants were asked about the application of drugs for last six months. Six months was set as the time limit in order to avoid any possible observatory period by the physicians.

The purpose of the survey and the English terms used in the questionnaire was translated in Bengali for the people who were not able to understand English.

Statistical analysis

A descriptive analysis was performed using Microsoft excel version 10, to calculate the prevalence of non-prescribed medication use. The results were represented in complete figures and percentages.

Ethical considerations

This study was approved by the ethical review committee, department of pharmacy, NUB (Ref No.: DoP/RC/EC/2019/09/01). The general principles (section 12) of WMA (World Medical Association) declaration of Helsinki was the basis for ethical consideration.¹⁰

No sample was collected; instead, patient's-based questionnaire was filled up by interviewing the participants.

RESULTS

Study population

It was found that among the 400 respondents 300 (75%) used non-prescribed medication.

The average ages of the respondents were 25.813 (± 9.817) years with 154 (51%) female and 146 (49%) male. Amongst them 201 (67%) was students, 60 (20%) was service holder, 26 (9%) were housewife and 13 (4%) was other professionals. The results are outlined in the Table 1.

Table 1: Incidence of non-prescribed medication use and the features of the participants.

Incidence of non-prescribed medication use		
Variables	Frequency (n=400)	%
Non-prescribed medication users	300	75
Do not uses non-prescribed medication	100	25
Sex		
Male	146	49
Female	154	51
Age (years)		
15-20	90	30
21-25	121	40
26-35	52	17
>35	37	12
Average age	25.813±9.817	
Occupation		
Student	201	67
Service holder	60	20
Housewife	26	9
Others	13	4

Factors influencing non-prescribed medication use

The key causes for the non-prescribed medication use were subjective information on drugs (29%), recommendation by others (28%), experience from previous use (27%), cost of doctor’s visit (15%) and self-doubt about physician’s treatment (1%). The results are depicted in the Figure 1.

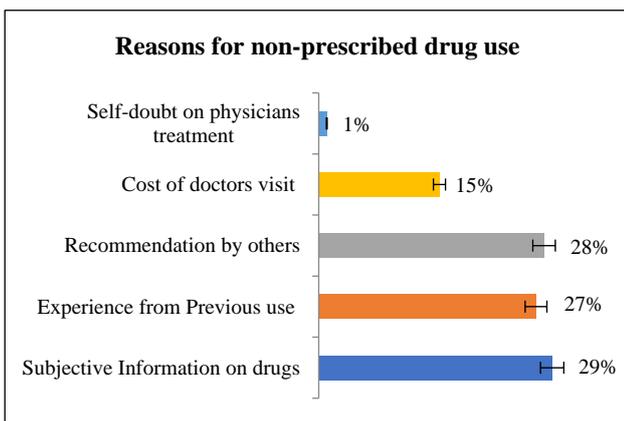


Figure 1: Reasons for non-prescribed drug use.

The illness played vital roles for using drugs without prescription represented in the Figure 2. The finding shows that the drugs were used for the treatment of fever (27.73%), gastric acidity (22.13%), headache and other pain (15.13%), dysentery and diarrhea (8.68%), allergy (8.40%), common cold and cough (4.76%), vitamin deficiency (4.20%), skin disease and inflammation (3.08%), parasitic worms (1.40%) and anxiety (1.12%).

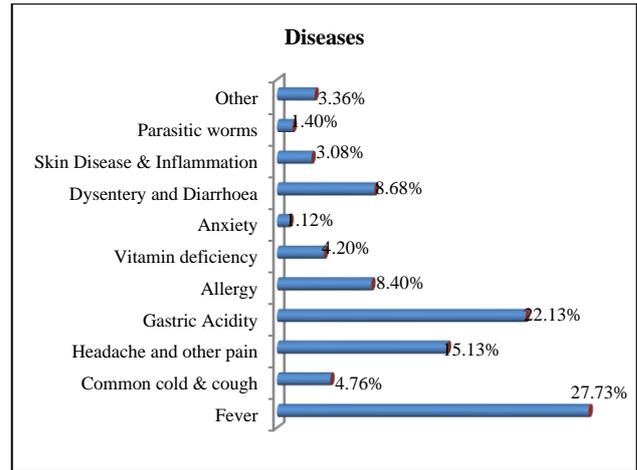


Figure 2: Diseases for non-prescribed drug use.

Types of drugs used and the duration if medication

The Table 2 delineates the mostly used drug. The classes of predominantly used drugs were NSAIDs (28.17%) after that antacid (21.13%) then antibiotic (16.90%), antiallergic (10.70%), antiamebic (dysentery) (7.89%), vitamins (5.35%), antiemetic (2.54%), antipsychotic (2.54%), analgesic (1.41%), antitussive (1.41%) and anthelmintic (1.13%).

Table 2: Types of drugs used without prescription.

Drugs	No of participants used the drugs	Percentage
Antibiotic	60	16.90
NSAIDs	100	28.17
Antacid	75	21.13
Dysentery	28	7.89
Antiemetic	9	2.54
Antiallergic	38	10.70
Vitamins	19	5.35
Antipsychotic	9	2.54
Analgesic	5	1.41
Antitussive	5	1.41
Anthelmintic	4	1.13
Others	3	0.85

(Some participants had used more than one drug for more than one disease. Thus, the sum of the respondents and the percentage is not always 300 and 100% respectively).

The individual member of medicine for the leading groups of drugs are represented in the Figure 3.

In case of NSAIDs the most commonly used class was paracetamol (65%); for antacids the highest used class was omeprazole (56%), followed by ranitidine (23%), whereas for antibiotics the mostly used class was metronidazole (42%) then azithromycin (23%) and tetracycline (17%); on the other hand, for antiallergics the maximum used drug class was cetirizine (39%) followed by fexofenadine (26%) and chlorpheniramine (26%).

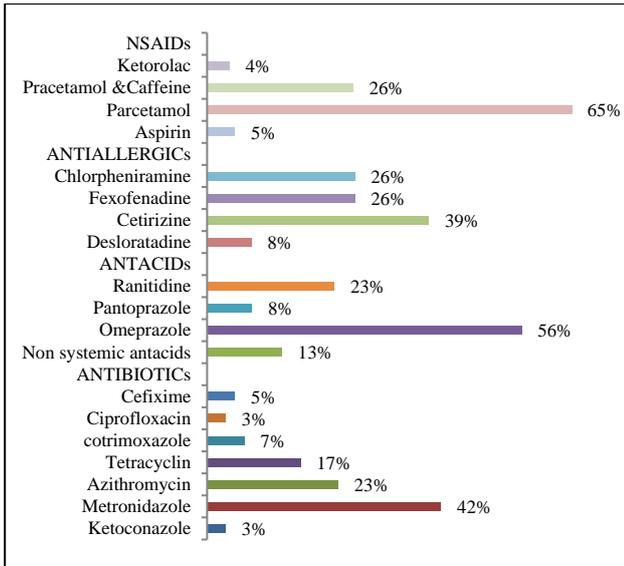


Figure 3: Mostly used drug class.

In terms of duration of medication, 31% participants used the drug from 6 to 12 months; while the rest of them 69% used for more than 12 months. Long term use varied from 01 to 15 years. Most of the participants (25%) used the drugs for 01 to 02 years, then 03 to 04 years (19%), followed by 05 to 07 years (18%) and 08 to 15 years (5%). 1% patients used the drugs for more than 15 years.

The observations are delineated in the Figure 4.

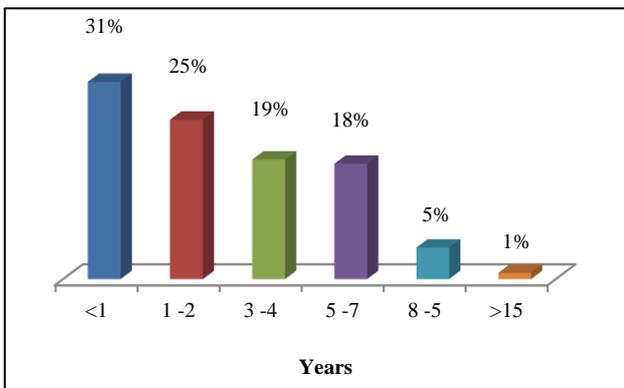


Figure 4: Duration of medication (years).

Effectiveness and source of drugs and motivation for suggestion to others

Most of the users (62%) found better action of the drug against their diseases, where 34% got extremely good effect of drugs. Only 1.67% user's experienced side effects on the other hand 1% didn't get desired effect and the effect was not clear for 0.67% users. Remarkably nobody noticed toxic effects. Observations are illustrated in the Table 3.

The drugs were purchased from pharmacy by the patients. Regardless the type of drugs, only 11% drug seller asked

for prescription during purchase while 89% didn't. Remarkably 125 (42%) participants suggested their drugs to others. Among them 45 (36%) told the drug's action is excellent while 80 (65%) claimed good during recommendation to others.

Table 3: Effect of drugs.

Effect of drugs	Frequency (n=300)	Percentage
Extremely good	103	34.33
Better	187	62.33
Ineffectual	3	1.00
Experienced side effects	4	1.67
Noticed toxic effects	0	0.00
Not clear	3	0.67

DISCUSSION

The participants representing different classes preferably the young students had the highest rate of self-medication practices followed by the service holders' housewives and other professionals. These values were quite similar, of that observed for the age dependent pattern among the young medical and non-medical university students in Palestine.¹² Similar findings were also reported for the Bangladeshi medical students lived in the Dhaka city.¹³

The provoking factors leading to the self-medication was found to be the knowledge of the drugs by the patients themselves. They gathered this information principally from their past history of medication as well as from the recommendations from others, both of which are neither reliable nor recognized as the safe and effective medication practice.¹⁴ This result also reflects the relationship between the socioeconomic condition and the medication tendency among the participants which intern reveals the lack of information regarding the dangers of such practice.¹⁵

The majority of the participants used the non-prescription drugs for the treatment of fever, acidity, headache, dysentery and diarrhea. Analogous tendency related to the treatment of these types of diseases were previously observed among the Europeans as well as in the residents of Guatemala City.^{15,16}

On the other hand, the prevailing classes and types of drugs found among the respondents were NSAIDS followed by antacids and antibiotics. A very similar findings were reported for the students from the medical college of Dhaka city.¹⁷

The prevalence of antibiotic hazards, not only among the Indian subcontinents but also in the world as a whole represents an open challenge for the prevention and cure of diseases.^{18,19} The haphazard use of antibiotics is common for both the urban and city dwellers particularly among the Asians. The scenario described in this study

reflects that the general trend in the consumption of antibiotics along with the pain killers is growing amongst the educated people; which were previously found to be usual for the general people as reported by the WHO.²⁰

Although the antibiotic is less in amount with respect to the painkillers, but its use without prescription is clearly a shocking sign due to the danger for possible resistant.²¹ The highest tendency among the young generation to use the painkillers without knowing the dose and duration of medication could be regarded alarming because it is also becoming a common types of home medication.²²

The reluctance of the sales man working at the medicine shop regarding the verification as well as asking the customers them for prescriptions was found to be poorly practiced. This detection indicates that, the drugs even the antibiotics used by the patients were very easy to get. Conversely it can be stated that, the choice of the drugs was based upon their ease of purchase and availability.²³ This picture urges the assurance of the implementation of laws for the safe and effective application of drugs amongst young generation. So that the challenges of emerging drug resistance can be defeated.^{24,25}

The observed results described here is subject to several limitations. The study was conducted to have reflections in-terms of non-prescribed medication use by the young generations, service holders and educated female participants living in the DSCC thus the result obtained in this study cannot be regarded as a complete scenario for the citizens dwelling in the Dhaka city in general. The second limitation concerns the participation of the persons interviewed. Since the data were collected only from the respondents who engaged themselves in the survey of their own free will, therefore the study clearly lacks the information of the disinclined non-prescription users. Furthermore, the time constrains of the survey may have the chance to lose active participation of many interviewees which would otherwise have different values. Finally, as with the majority of questionnaire-based studies, the design of the current survey also suffers the deficit of procedures for the measurement of truthfulness of the answers obtained from the participants.

CONCLUSION

The survey revealed that, the modern era with available information sources has set the young generation free to choose self-medicines by themselves without knowing the future consequences. Based on this study it can be stated that, the government needs to implicate the rules for safe distribution and sale of medicine for all. In addition, awareness regarding the risk of self-medications should be circulated among the young generations. The future of the nation as well as the humanity depends on healthy populations and the sound health of the youths is the key to prosperous future for the world. That should be assured through safe practice of medication to be led by the young generation.

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