
PUBLIC HEALTH RESEARCH

Knowledge, Attitude & Practice of Self-Medication with Painkillers among Young Adults, Bangladesh

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ABSTRACT

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Introduction Self-medication, the unsolicited use of prescription and over the counter (OTC) drugs, is practised all over the world, particularly in countries like Bangladesh. So, this study is focused on the prevalence and attitude and knowledge about various aspects of self-medication with painkillers among students of the selected residential university of Dhaka, Bangladesh.

Methods It is a cross-sectional interview-based study. The study population was the students of the university who lives in attached residential halls. The total number of respondents was 209.

Results Every respondent both male (105) and female (104) have reported that they had practiced self-medication with painkillers for their both acute and chronic pain like headache, menstrual cramp, back/muscle/joint pain etc. Drugs commonly used by the students were Napa (19.6%), Paracetamol (12.9%), Etorix (6.2%), ACE (10.0%) HPR ds (10.0%), Rolac (9.6%) etc. Many of the drugs were non-OTC drugs. The main sources of information were advised by the manager of the pharmacy (36.8%), self-decision (16.7%), media (12.0%) and advice from friends/relatives (23.0%). The prime factors that influenced students to try self-medicated painkillers were dissatisfaction toward the medical centre in the area (23.9%), cost-effectiveness (20.6%), unavailability of medical facilities (11.5%) etc. 64 of the respondents (both M & F) reported that they have no clear idea about the possible side effects of the chronic use of painkillers. Dependency on a painkiller for pain management was (M=32 and F=48).

Conclusions 41% of students taking a self-medicated painkiller with analgesics in an emergency perceive it as safe.

Keywords Self-medication - pain killers - young.

INTRODUCTION

Self-medication is described as an act of procurement and consumption of medical drugs without the advice of a medical physician for identification, recommendation and inspection of treatment.¹ In Pakistan, the practice is measured as a major component of self-care and primary public health resource in health care.³ The epidemiological data has discovered high frequency all over the world; up to 59 % in Nepal and other developing countries, 92% in adolescents of Kuwait, 31% in India and in European countries (Sweden, Finland, Netherlands) ranged from 17–67%, depending on the underlying recall period.^{2,4} Besides, studies conducted in Karachi have established the frequency of self-medication among university students to be as high as 80.4%.³ Specifically, usage frequency among non-medical students was 83.3 % while for those in medical school, it was projected to be 77.7%.⁵

In recent times there has been a substantial augmented concern among public and professional health associations regarding absurd usage of analgesics.⁶ Researches have deduced that the practice of self-medication is more common among women especially facing long term physical problems, psychological conditions and those who reside alone, and those who are students.⁷ Additionally, factors that have contributed significantly to this intensifying trends in modern societies are availability of medicines as over the counter medicines, meagre authoritarian practices and a long delay in medical care from residence and lack of access to healthcare.⁸

It is understood that public consciousness along with enforcing and implementing laws about prescribed medications can immensely lessen the rate of self-medication [9]. In Bangladesh, it is a common scenario that the prescription drug is sold in a pharmacy without prescription; which is strictly illicit according to local law.^{10,11} The seller dispensing these prescribed drugs have no information of patient's allergies, contraindications and as a result, habit-forming medicines are easily accessible without prescription.^{9,10} Therefore, the study aimed to evaluate the knowledge and prevalence of self-medication among the students of a selected university.

Traditionally, it has been described as the intake of painkillers, herbs or other home remedies on an individual's own wiles or being influenced to take the advice of another person without consulting a general practitioner is now becoming a very common incidence in most of the countries of the world.¹² Studies have identified some common reason that is playing a noteworthy role in most of the self-medication incidence and those are the shortage of time to visit a physician, inability to get a rapid appointment, mild illness, long distance of hospitals and clinics from home, and finally

exorbitant doctor's fees.¹³ The substances which are most comprehensively self-medicated are OTC drugs and dietary supplements, most commonly painkillers. The practice of self-medication has become very well-known throughout the world with an elevated dominance rate in developing countries.¹⁴ Some studies have found that the amplitude of self-prescribing rate in Asia is 4–7.5% which is higher than that of 3% in northern Europe.¹² It is anticipated that Young adults, especially students are highly aggravated towards self-administration of drugs by the internet and media.¹⁵ So the study on self-practice of medications among university students is imperative as they are that segment of the population who are well educated and have access to all the information regarding their health.^{16,17} Over-the-counter (OTC) drugs that are mostly sold in Bangladesh paracetamol, ORS saline, metronidazole, ranitidine, omeprazole, aspirin, and diclofenac sodium etc.¹⁸

Self-medication is one of the vital issues in the healthcare sector and has been pondered.⁶ Those who are against it believe that it may be related to erroneous self-diagnosis, hindrances in seeking medical counsel when needed, infrequent but severe undesirable reactions, dangerous drug interactions, inaccurate manner of administration, incorrect dosage, incorrect preference of therapy, masking of severe disease, and jeopardy of dependence and maltreatment.^{4, 17} Alternatively, WHO has pointed out that appropriate self-medication can be of assistance in treating acute ailments that do not necessitate medical consultation, can save the time spent in visiting a physician and provides a cheaper substitute for treating ordinary diseases.^{9, 19} Some governments are also heartening self-care of minor illnesses, together with self-medication.²⁰ Careful self-medication facilitates to reduce the expenditure of the healing process, travelling time as well as consultation session time.¹⁹ Young adult students are prone to practice self-medication due to their low sensitivity of risk linked with the use of drug, effortless access to the internet, boost in unfettered pharmaceutical marketing, equipped access to drugs, level of education, economic conditions and social status etc.¹⁴ The prevalence rates of self-medication amongst university students are high and previous studies have reported this rates of about 94% in Hong Kong, 76% in Karachi, Pakistan, 87% in India, 86.4% in Brazil, 98% in Palestine, 55% in Egypt and 43.2% in Ethiopia.³ The current circumstances of Bangladesh imply that most of the people when they get sick, instead of going to the hospital or rushing to the doctors, take medicines on their own accords.^{21, 22} Prominent factors, such as education, family, society, law, availability of drugs and revelation to advertisements have played a role in this.²³ Governments and health establishment have to make assured that self-medication is performed in a conscientious manner, and launch

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that only safe and sound drugs are made obtainable as over the counter (OTC) and that patients are given ample information about drug usage, their contraindications and side-effects.^{19,24} Apposite self-medication can alleviate medical troubles and save time spent waiting to see a physician.²⁵ This could save money and even lives in acute conditions. It is also accepted that responsible self-medication for self-care could be beneficial to health care providers, pharmaceutical industries, governments and patients.²⁶ The use of analgesics is extensive worldwide. Some analgesics are categorized as OTC drugs and some are not. Side-effects experienced may diverge with different people and overuse could be detrimental.²⁷ The level of self-medication reported in Bangladesh and comparable countries is high.

METHODS

Study design and setting

This was a descriptive, cross-sectional survey which was conducted at the Jahangirnagar University, Savar, and Dhaka from May 29- September 10, 2018. It is a residential university so the survey was mainly conducted at halls of both boys and girls. The process followed standardize protocol including informing the purpose of the study and encryption of respondent's response for confidentialities.

Inclusion and exclusion criteria

Students who live in the halls of selected were selected randomly. To meet the inclusion criteria, self-prescribed painkillers were defined as usage of any pain-relieving product (prescription drugs and

over-the-counter drugs as well), in the past 1year with one's own accord, which was not prescribed by a health physician. A time period of 1year was allocated to eliminate recall bias among the participants who had used painkillers and were likely to recall it in this adequate time period, with those participants who had not used any and would also clearly remember not having used them in the suggested time period.

Data collection procedure

Verbal informed consents were obtained from the participants after a brief introduction of the study. However, some medical terms and acronyms were made to understand clearly to avoid any confusion among students.

Date collection tool

Semi-structured questionnaire.

Data entry and analysis

Data entry and analysis was performed using SPSS version 22.

RESULTS

A remarkable high response rate of 100% was obtained due to a proper explanation of the proposal and assurance of maintaining full confidentiality of the data they provided. Total 209 students were interviewed and among them, 105 were male students and 104 were female students. That consists of 50.2% male respondents and 49.8% female respondents.

Table 1 Table showing frequency of respondent suffering from any specific pain cross tabulation (Source: Field Survey)

		How often respondent suffer from any specific pain				Total
		Almost never	Once a week	Once a month	Recurred pain happening any time	
Sex of the	Man	32	23	12	38	105
Students	Woman	18	8	29	49	104
Total		50	31	41	87	209

Table 2 Table showing distribution of the respondents by their source of suggestions of trying painkillers

Source of Suggestion of Painkiller	Frequency	Percent
Manager of the pharmacy	77	36.8
Ask relatives/friends	48	23.0
Nobody, I knew myself	35	16.7
Media	25	12.0
Internet	19	9.1
Others	5	2.4
Total	209	100.0

Table 3 Distribution of the respondents by their awareness about the side effects of painkillers

Awareness of side effects of painkiller	Frequency	Percent
No, I have no idea	40	19.1
I think it's safe	55	26.3
Yes, I know	48	23.0
Don't know clearly	64	30.6
Others	2	1.0
Total	209	100.0

Table 4 Distribution of the respondents by their Source of information about the side effects

Source of information about the side effects	Frequency	Percent
Leaflet	56	26.8
Doctor	33	15.8
Pharmacist	23	11.0
Family	35	16.7
medical campaign	17	8.1
Media	21	10.0
Others	8	3.8
Total	193	92.3
Missing	16	7.7
Total	209	100.0

Table 5 Distribution of the respondents by their warning from the manager of pharmacy about the side effects

Warning from the manager of pharmacy about the side effects	Frequency	Percent
Yes	59	28.2
No	150	71.8
Total	209	100.0

Table 6 Distribution of the respondents by the factors that influenced to try self-medication

Factors that influenced to try self-medication	Frequency	Percent
Unavailability of medical facilities.	24	11.5
Dissatisfaction about available medical facility.	50	23.9
I thought the pain was not severe enough.	36	17.2
Heard from someone.	27	12.9
Cost effective.	43	20.6
Time shortage.	14	6.7
Long distance from home to medical facility.	8	3.8
Inability to get quick appointment	7	3.3
Total	209	100.0

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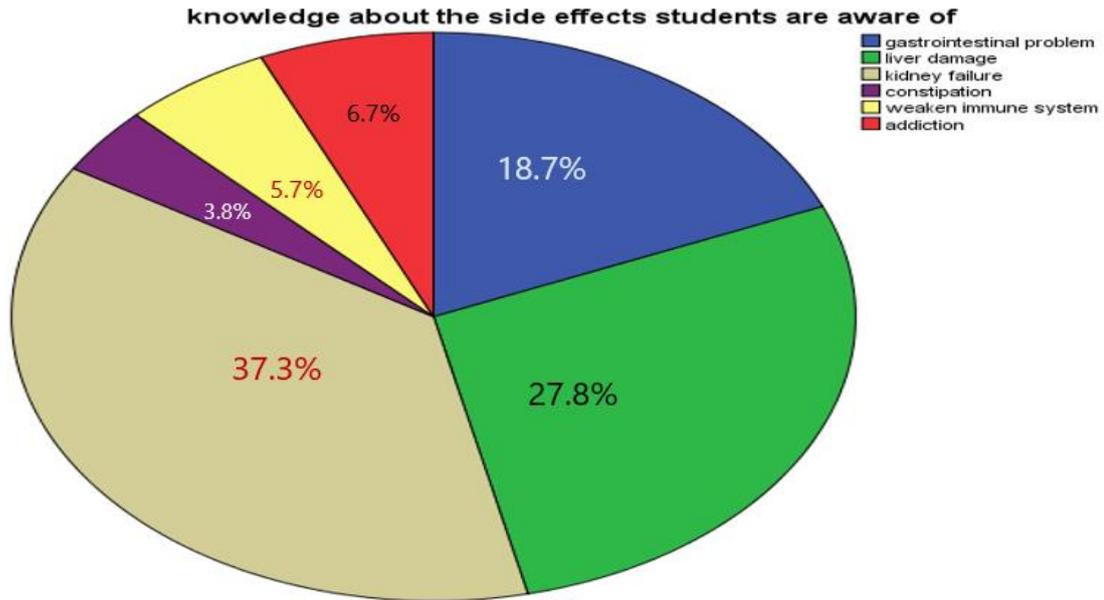


Figure1 Knowledge of students about the side effect

The pie chart illustrates the common side effects of painkillers that students know about. The most frequently answered side effect is Kidney failure constituting 37.3%, followed by liver

damage 27.8%. Other side effects are gastrointestinal problem, constipation, weakened immune system, addiction.

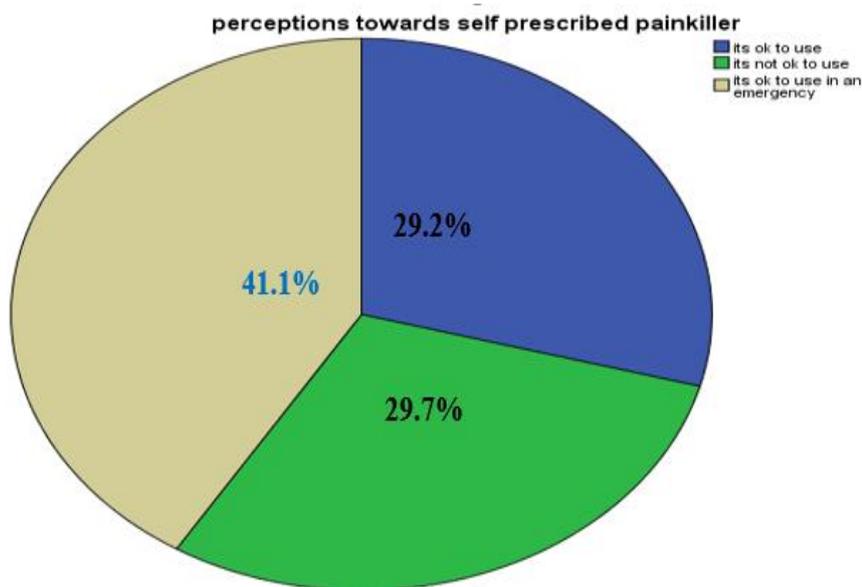


Figure2 The attitude of students toward self-medication with painkillers

We interviewed students on their perception of the intake of self-prescribed painkillers. Majority of the students (41.1%) think that it's okay to use painkillers in an emergency. About 29.2% of them think it's not okay to use painkillers

Table 7 Distribution of the respondents by their ways of pain management other than painkillers

Ways of pain management other than painkillers	Frequency	Percent
Just tolerate it and try to sleep	106	50.7
I try herbal medicine	59	28.2

I try home remedies	43	20.6
Total	208	99.5
Missing	1	.5
Total	209	100.0

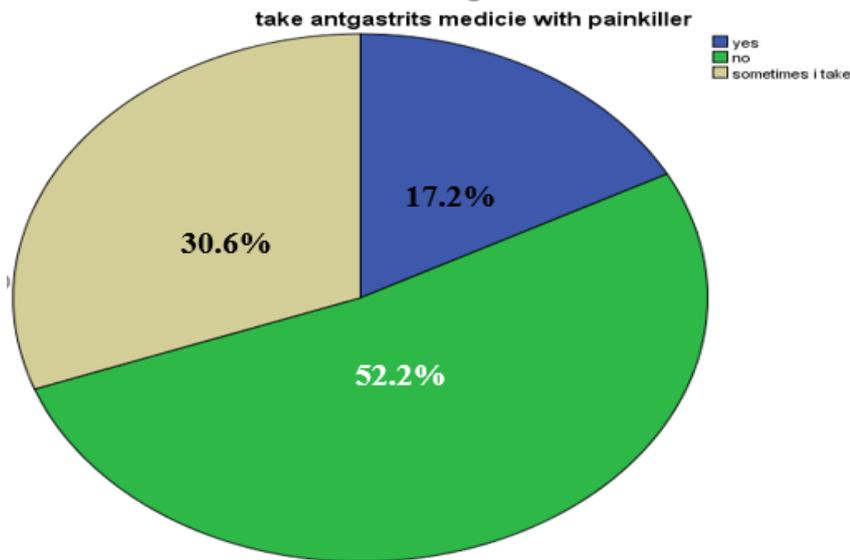


Figure 3 Frequency of students taking anti gastritis medicines with painkillers

As gastritis problem is one of the major side effects of painkillers, it is suggested to take anti gastritis medicines along with painkillers. So we investigated the frequency of students who know

and follow this. It was found that 52.2% of the respondents don't take it. Only 17.2% takes such medicines as precautions. 30.6% of the respondents stated that they use it sometimes.

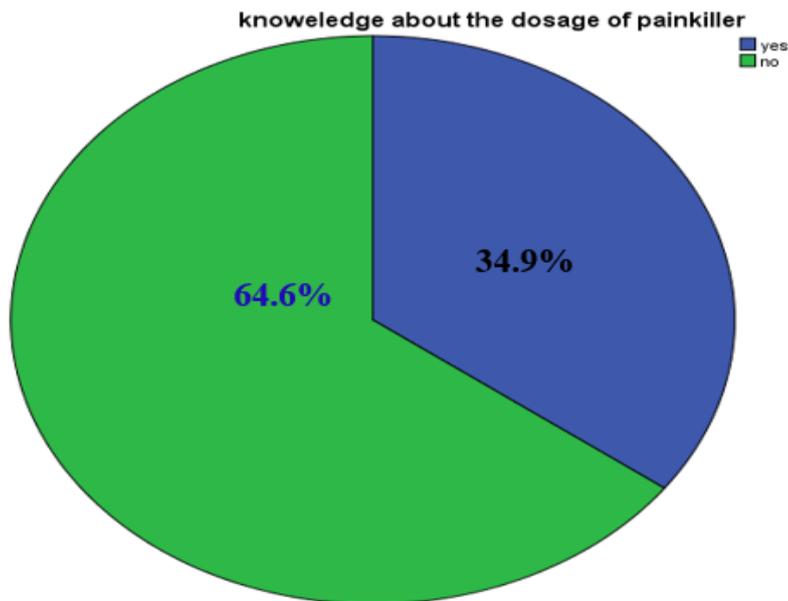


Figure 4 Knowledge of the students about dose

We interviewed students on their dose knowledge about any painkiller they generally intake. 64.6% of the students take the painkillers without having clear idea about the dose. 34.9% students know the proper dose of the painkiller they generally intake for any particular pain.

DISCUSSION

In the investigation of 209 students of Jahangirnagar University, almost every one of the respondents has done self-medication with painkillers at the time of their stay in the residential halls. Some of them have demonstrated basic knowledge and awareness of analgesics. But a bigger percentage of students

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lacked knowledge of side effects, risks of chronic use.

The data collected showed that pain in the headache was the most common problem that most of the students have reported. 27 male and 35 female students stated that they feel headache most frequently. 24 of the female students demonstrated their worries about menstrual cramps. On the other hand, 22 male students have back pain whereas only 8 of the females complained about the same. Pain in teeth was another problem that the students stated. 13 male and 6 female students report their teeth pain. Abdominal pain was another common cause of worry among the students but the rate was higher in female¹⁶ than in male.⁸ This is supported by another report on this issue that men generally suffer from more muscle sore and back pain than females.⁷

The students reported name of the painkillers that they take by their own administration. We found that Napa, Paracetamol, HPR DS, Etorix, rolac etc were the most frequently used painkillers among students. Some of the students had difficulties to recall the name of the painkiller they used. Nevertheless, almost all of them responded and answer this question. Though may not be aware of the contraindications and risks they do exhibit some basic knowledge. Most of the study related to this field also showed that majority of the people go for self-medication with these common types of painkillers available at over-the-counter.²

There is a significant difference found in the study. The results demonstrated the difference between the regularity of painkiller intake between male and female students. Total of 57 female students said that they use painkillers every time they feel pain. On the contrary, only 24 male students said the same. Besides, 47 of the male students said they rarely use any painkiller whereas only 27 of the female students said so as supported by a comparative study of painkillers dependency between males and females.^{7, 14}

The most common factor that the students had stated was dissatisfaction toward available medical facility in their residential area. The medical centre they have in the area, most of the students found dissatisfactory. So they choose to go for self-medication. Another significant factor was the expenses. Students find it cost-effective to just intake one or two painkillers to get rid of pain instantly. Higher expenses of medical facilities are one of the major factors for students of a developing country like Bangladesh to go for self-medication. Similar studies related to this field also have also shown that economical constrain is the major factor for people to try self-prescribed drugs,⁷ 43 students stated this. 36 of the respondents thought that the pain was not severe enough to seek professional medical assistance. 24 of them got influenced by

their family/friends/peers to try it as they had heard the particular drug works effectively.

Students were asked about their perception toward self-medication with painkillers. 86 of them reported that they think it is okay to use painkiller in an emergency. But 62 of the respondents think it's not okay to go for self-medication without proper knowledge that's a significant finding of the study. As the study sample was chosen irrespective of the academic field and students from all departments were included, it was expected that the majority of the students may have positive attitude toward the cost-effective way of treating pain. A study conducted in students of another South-Asian country have also yielded similar results.^{3, 5}

Students knowledge about the side effects of painkillers was enough satisfactory. 78 of the respondents think chronic use of painkiller can cause kidney failure, 58 of them knows about liver damage, 39 of them are well aware of the gastrointestinal problem. Some other side effects were also demonstrated by them such as addiction, constipation, weaken immune system etc. As university students represent one of the most intellectual segments of the country, it is obvious that they will have at least some basic knowledge about the health effects that may cause by chronic use of painkillers.^{13, 28}

We investigated the knowledge about the dose of the painkiller that the students use generally for any particular pain. 135 of the respondents have no clear idea about the essential dose that they should maintain. While similar studies were conducted in medical students or nursing students, the findings were quite different in this part. It was showed that nursing and medical students have better knowledge about the dose of a particular drug for treating pain.^{2, 29}

CONCLUSION

Self-medication practice with analgesics is vastly predominant among university students. This study also shows that the majority of students not having any idea about the appropriate dose sometimes overuse it. However, we suggest a wide-ranging study on self-medication in Bangladesh. It is also suggested that as university students represent the most educated segment of the population, they should be made cognizant of the potentially perilous effects of self-medication and the side-effects of various pain killers. The construction of multimedia programs or animations could be obliging in refining the knowledge of the whole community about the potential menaces of self-medication.

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