

## COMPARATIVE STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF MEDICATION AMONG THE MEDICAL AND NON-MEDICAL UNDERGRADUATE STUDENTS IN DHAKA CITY

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Article Received on 22/03/2017

Article Revised on 13/04/2017

Article Accepted on 04/05/2017

### ABSTRACT

Self-medication is widespread in Bangladesh and clinically inappropriate and inefficient use of medicines is a serious problem as a whole. Self-medication involves the use of medicine by the people who want to treat self-recognized symptoms by themselves. A cross sectional survey was conducted by 400 pre-tested and validated questionnaires distributed among the undergraduate students of similar age group and corresponding education level in Dhaka city. The survey was done simultaneously on 3<sup>rd</sup> year and 4<sup>th</sup> year medical students of Holy Family Red Crescent Medical College and Faculty of Business Administration in Green University, Dhaka during February to May 2016. To compare the knowledge, attitude and practice of self medication among the undergraduate students, medical and non-medical education had some impact in the responses. Undergraduate medical students were found to practice more self medication (78.1%) than the non-medical students (55.1%). Anti-pyretic or analgesics are the most common self-medication by medical students, whereas multivitamins are by non-medical students. The reasons behind the self medication was 'minor illness' (40%) and 'confidence on self knowledge' (33%) among the medical students; whereas the main reason among non-medical students was 'need immediate relief' (24%). Present study finds significant difference regarding self-medication antimicrobials and also with antiulcer drugs, cough-syrups, antipyretics, vitamins with minerals among the medical students of Bangladesh and West-Bengal. It may be due to lack of implementation of proper regulatory control on OTC sale of antimicrobials in Bangladesh.

**KEY WORDS:** self medication, medical students, non-medical students, practice, attitude, knowledge.

### INTRODUCTION

Self-medication involves the use of medicinal products to treat self-recognized disorders or symptoms, or the intermittent or continued use of a medication for acute, chronic or recurring diseases or symptoms. In practice, it also includes use of the medication of family members. It is practiced all around the world with the advancement of information system, self-care and progressive demand for working well being. In recent years there has been an increasing trend of self-medication with non-prescription or over the counter (OTC) drugs available in pharmacies and retail outlets.<sup>[1]</sup> Self medication with over-the-counter medicines has long been a feature of the lay health system and the current trend towards it seems alarming, especially in developing country like Bangladesh with numerous regulatory loop-holes. Moreover prescription only drugs like antimicrobials,

pain reliever (NSAIDs) are also been reported to be used increasingly in self-medication.

Self-medication is widespread in Bangladesh and clinically inappropriate and inefficient use of medicines is a serious problem.<sup>[2]</sup> Incorrect use of drugs for primary and adjunct therapy in psychiatric diseases should be recognized and prohibited.

Self-medication involves the use of medicine by the people who want to treat self-recognized symptoms by themselves. Self-medication thus forms an essential part of self-care, which also includes non-drug self-treatment, social support in illness, and first aid in everyday life.<sup>[3]</sup> Self medication also involves getting medicines without a prescription, resubmitting old prescriptions to buy

medicines, telling about medicines to friends or relatives or using leftover medicines stored at home.

Potential risks of self-medication practices include: incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse.<sup>[4]</sup>

It was found that drug use is influenced by the socio-demographic characteristics such as gender and age and some socio-cultural aspects, like attitudes about life and health, stress, and social bindings of the consumers.<sup>[5]</sup> The availability of medicine to the consumers increases the quantities and varieties of pharmaceuticals worldwide and thus is misused. This situation has been reported in Nigeria.<sup>[6]</sup> Even self-prescribed medicines are also prevalent among practicing physicians. In New Delhi, India, it was observed that self-medication was considerably high among undergraduate medical and paramedical students in India and this situation was increased with medical knowledge.<sup>[7]</sup>

This study was done to focus on reasons for self-medication, differences among medical and non-medical students in using different types of self-medication, reasons for seeking professional help and student's view about safety of self-medication as major factors to judge the characteristics among medical and non-medical students. Thus, young adults are highly influenced by the media and the internet, where self-medication behavior is promoted.

**MATERIALS AND METHOD**

The cross sectional survey was conducted among the 3rd and 4th year undergraduate students of Holy Family Red Crescent Medical College, Dhaka and Department of Business Administration, Green University of Bangladesh, Dhaka from February 2016 to May 2016. Total 400 pre-tested and validated questionnaires were distributed among the undergraduate students of similar age group and corresponding education level. The objective of the study was explained to the participants and confidentiality was ensured prior to data collection.

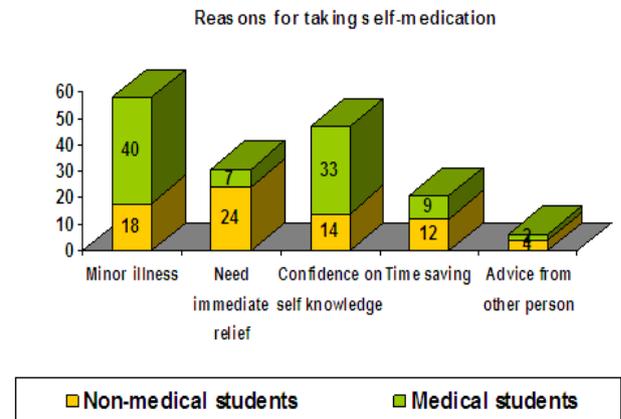
**RESULTS**

Total 400 questionnaires were distributed and of them 382 respondents returned the filled up questionnaire. 18 questionnaires were incomplete or not returned from the respondents and were excluded from the study. Among the returned questionnaires, 197 and 185 respondents were undergraduate medical and non-medical students respectively.

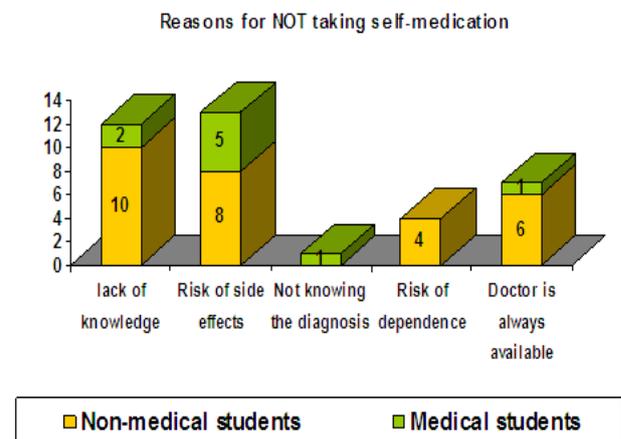
Among the participants 154 (78.1%) undergraduate medical students and 102 (55.1%) non-medical students practiced self-medication. The reasons behind the self

medication was 'minor illness' (40%) and 'confidence on self knowledge' (33%) among the medical students; whereas the main reason among non-medical students was 'need immediate relief' (24%).

The reasons behind not taking self-medication by medical students were mainly 'risk of side effects' (5.2%) whereas the 'lack of knowledge' (10%) was among non-medical students.



**Figure 1: Reasons for taking self medication among medical and non-medical student.**



**Figure 2: Reasons for not taking self medication among medical and non-medical students.**

**Table 1: Drugs used for self-medication.**

Drugs	Medical students	Non-medical students
Antibiotics	11	05
Pain / Fever reliever	47	32
Anti-ulcer agents	31	18
Anti-histamines	35	16
Multivitamins	16	41
Cough syrup	14	12
Sleeping pills	09	19

Some questions had multiple options, so the sum of the respondents are not always 100%

**Table 2: Symptoms / Disease for self-medication.**

Symptoms / Disease	Medical students	Non-medical students
Headache	61	53
Fever / cold	42	21
Diarrhea	12	18
Acidity	48	58
Pain / menstrual symptoms	29	11
Sleeplessness	13	23

Some questions had multiple options, so the sum of the respondents are not always 100%

In practicing self medication, pain and fever reliever (analgesic/ antipyretic) drugs were most commonly used by medical students and multivitamin supplements were mostly used by non-medical students. Headache was found to be the commonest symptoms for self medication by medical students and acidity was in non medical students.

## DISCUSSION

Self-medication refers to use of drugs that have neither prescribed nor recommended or controlled by a licensed healthcare specialist. In many countries including Bangladesh almost all drugs consumer can procure as OTC products including scheduled drugs. Thus very often patients and drug-sellers take an opportunity to use and maximise their profit in the name of self-medications. It is more likely to be inappropriate without complete knowledge though it has become a routine medical practice nowadays by undergraduate medical as well as non-medical students.<sup>[6,8,9]</sup>

The present study shows that 78.1% undergraduate medical students and 55.1% non-medical students practiced self-medication which was almost similar to another study conducted in Dhaka city. Almost 77.5% of undergraduate medical students were reported to practice self medication in the study by Mosaddeq *et al.*<sup>[10]</sup>

Other studies that were also conducted among medical students of Indian subcontinents were between 57% to 91%.<sup>[11,13]</sup> The prevalence of self-medication with OTC drugs in some developed an upper middle-income countries like USA, UK, Sweden, Switzerland, Mexico, South Africa were 21% to 37% only. It is very difficult to compare the prevalence of different studies with present study due to different demographic characteristics, methodology, and socio-economic status. Self-medication was more popular among female than male for certain conditions where pain killers were mostly required.<sup>[14]</sup>

The reason behind self -medication by medical students in present study was 'minor illness' (40%) and 'confidence on self-knowledge'; whereas in case of non-medical students, the main reason was 'need immediate relief' as shown in Fig-1. In a similar study in tertiary

care medical college in West Bengal, fever with headache (83.55%) followed by common cold with cough (64.4%) were the reason of self- medication in medical students.<sup>[11]</sup> Fever and headache were the prime reason in medical (30.5%) and (31.3%) in non-medical students, followed by antihistamines (22.7%) and (15.6%); anti-ulcer agents (20.1%) and (17.6%); multivitamins (10.3%) and (40.19%); antibiotics (7.1%) and (4.9%) sleeping pills (5.8%) and (18.6%). Present study finds significant difference regarding self-medication antimicrobials and also with anti-ulcer drugs, cough-syrups, antipyretics, vitamins with minerals among the medical students of Bangladesh and other neighboring countries like India and Pakistan. It may be due to lack of implementation of proper regulatory control on OTC sale of antimicrobials in Bangladesh. In the study conducted in Karachi, analgesics were the most common (88.3%) followed by antipyretics (65.10%) and antibiotics (35.20%).<sup>[12]</sup>

Study conducted in Bahrain also reported analgesics to be the most commonly used (81.3%) with antibiotics contributing only 6% of the total respondents.<sup>[13]</sup> The reasons behind that were strict regulatory policies regarding the prescription and OTC sale of antimicrobials. Lack of regulatory measures regarding prescription-drugs-only promotes self-medication which includes antimicrobial were quite high as happen in Bangladesh. The most prevalence source of information was self- decision (72.70%). Similar study in Palestine also showed that self- decision (47%) was the most common source of information. However in another study reading material (30.50%); advice from pharmacists (25.6%); information from relatives and friends were 14.10%; were the leading sources of information. Self-decision (64%) followed by advices from family and friends (31.65%) were the two most frequently reported sources of drug information for self-medication in a study in Ethiopia. A Brazilian study reveals that advice from family members (53.10%) and pharmacists (51.70%) were the most common causes of self-medication.<sup>[13-15]</sup>

Present study finds significant difference regarding self-medication antimicrobials and also with antiulcer drugs, cough-syrups, antipyretics, vitamins with minerals among the medical students of Bangladesh and West-Bengal. It may be due to lack of implementation of proper regulatory control on OTC sale of antimicrobials in Bangladesh. Another study from Karachi (Pakistan) showed that the headache (72%) is the commonest reason for self-medication followed by flu (66%) and fever (55%).<sup>[12]</sup>

The attitude and practice of undergraduate medical students towards self-medication was high. The major reason seems to be self-confidence, because of their skills and medical knowledge gained from their medical study. Although these information may not be enough at this level of study to judge and give decisions regarding

medication. Important disadvantages of self-medication would be the risk of making a wrong diagnosis, inappropriate drug use and its adverse effects. Unfortunately, the presented results indicate that the understanding of students to the pharmacist's role as a health-care provider in our country is minimal. Improved awareness for these issues in undergraduate students is critical for careful and cautious use of drugs. Therefore, this attitude should be considered, work out and resolve in Bangladesh.

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