Self Medication among Undergraduate Medical Students: An Alarming Concern of “Over the Counter” Drugs in Nepal

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ABSTRACT

Introduction: Self-medication signifies using drugs that have not been prescribed, recommended or controlled by a licensed health professional. At present self medication is reportedly a global issue and the practice is predominant in developing and under-developed countries. The main aim of this study is to try and uncover the attitude and practice of students in a medical school located inside Kathmandu valley towards prescription and self-medication.

Methods: A total of 104 students currently studying in one of the medical schools located inside Kathmandu Valley was provided a informed implied and verbal consent to participate in the study. All students were given a pre-validated, semi-structured questionnaire inside a lecture hall in their free hours between lectures. The data was analyzed and chi square test was done (p value<0.05) to see the association between medical students and their mind-set towards self medication.

Results: Among the total respondents, 80.8% thought that self medication was a part of self-care and 89.4% planned to continue self medication, 47.1% of them reported that they would advise their friends to stop practicing self medication, 70% reported having a registered medical practitioner with permission to prescribe medicines within 5-9 minutes walking distance from their abode, whereas around 1% reported that they self medicated so that they would not disturb the practitioners. From the total, 6.7% presented with some side effects and had to visit the hospital.

Conclusions: High incidence of self medication among undergraduate medical students might be able to sense false entitlement of almost being a doctor with authority to prescribe soon.

Keywords: self-medication; self-care; over counter drugs.

INTRODUCTION

Self-medication signifies using drugs that have not been prescribed, recommended or controlled by a licensed health professional.¹ World Health Organization on World Self Medication Industry declaration (WSMI) refers to self medication as the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms for its safe and effective use.² At present self-medication is reportedly a global issue and the practice is predominant in developing and under-developed countries.³,⁴,⁵,⁶,⁷

Self Medication has now found its way into students including those of medical schools as well.⁸,⁹,¹⁰ The main objective of this study was to acquire baseline data of self-medication among medical students studying in a medical college within Kathmandu Valley and to identified the relationship between self-medication by medical students associating with sex, source, adequacy of their knowledge on pharmacology, indications and frequency of usage.

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METHODS

A total of 104 students currently studying in one of the medical schools located inside Kathmandu Valley provided informed implied and verbal consent to participate in the study. All students were given a pre-validated, semi-structured questionnaire inside a lecture hall in their free hours between lectures. Informed verbal consent was taken and any queries pertaining to the questionnaire were explained in the language best understood by the respondents. The data was analyzed and chi square test was done (p value<0.05) to see the association between medical students and their mind-set towards self-medication.

RESULTS

A total of 104 medical students were assessed for practice of self medication among which 99% responded positively to having practiced self medication at some point in time. Among the total, 69.2% were males and the rest were females. From the total, 6.7% presented with some side effects and had to visit the hospital (Table 1). Among the total respondents, 80.8% thought that self medication was a part of self care and 89.4%) planned to continue self medication. From the total respondents, 47.1% of them reported that they would advise their friends to stop practicing self medication. From among those who self medicated, approximately 70% reported having a registered medical practitioner with permission to prescribe medicines within 5-9 minutes walking distance from their abode, whereas around 1% reported that they self medicated so that they would not disturb the practitioners. About 57.7% reported that they would self medicate even if they were not involved with medical field.

Table 1. Distribution of self-medication among respondents

| Variable     | n | %  |
|--------------|---|----|
| Self medication |   |    |
| Yes          | 103| 99 |
| No           | 1 | 1  |

When assessed with gender, it was seen that males practiced self medication more when compared to females, however, this was not statistically significant (p value >0.05). From those who self medicated, 5.8% presented with some side effects, not associated significantly (p value>0.05) (Table 2). Among those who self medicated, 81.6% thought that this was a part of self care compared to those who did not self medicate, associated significantly (p value <0.05).

When distance was assessed for self medication, it was seen that distance to a registered medical practitioner was not associated significantly with ones practice of self medication (p value >0.05).

Table 2. Gender distribution and side effects experienced with self medication

| Variable     | Yes n (%) | No n (%) | p-value |
|--------------|-----------|----------|---------|
| Self Medicated |           |          |         |
| Male         | 72 (100)  | 0 (0)    | >0.05   |
| Female       | 31 (96.9) | 1 (3.1)  |         |
| Experienced Side Effects |       |         |         |
| Self medicate | 6 (5.8)   | 97 (94.2)| <0.05   |

DISCUSSION

Our study found that 99% of the respondents had self medicated at some point of time. This is an alarming number and being a developing nation with far from efficient healthcare system, it has been plaguing our nation like any other developing or under-developed nation. Nepal is a landlocked country with geographic variations ranging from mountain peaks, high hills and valleys to flat lands. This topographic boon on other hand is bane for easy access to health care facilities. The national economic burden to tackle natural disasters occurring frequently in
the nation has resulted in healthcare facilities to optimum standards in these topographically complex areas of the country. The service providers like health assistants and chemists are the personnel who denizens seek out to in case of therapeutic need and pharmacies are usually the first point of query for any health related issues.\textsuperscript{11}

Medical personnel are the dutiful messengers of the society against self-medication. The medical students being the pillars of future medical fraternity should themselves be advocating against self-medication. Our finding that such a huge number of respondents acknowledging to having self medicated is in fact worrisome.

We also noted a typical “Do as I Say, Don’t Do as I Do” behavior in that though 89.4% of medical students planned to continue self-medication; a substantial percentage amounting to 47.1% reported that they would advise their friends to stop practicing self medication. It shows that they are aware that self-medication can lead to harm and hence advise friends to stop practicing self medication, despite willing to continue self medicating themselves. This “attitude-behavior gap” may be because self medication is sort of experiment with smaller stakes when it comes to real life consequences. Weber and Chapman reported that people are more risk seeking when the stakes are small.\textsuperscript{12} The risk taking behavior with small stakes might also explain the reason for self-medication even when one resides at a strategic position to meet the healthcare professionals easily whenever need arises.

The high incidence of self medication might also be a sense of false entitlement of almost being a doctor with the power to prescribe soon. Also that by the time the medical students reach third year or fourth year, they have completed their pharmacology course and learnt about the drugs and that they are already posted in clinical wards. Therefore, they falsely begin to believe that they have reached the “know it all stage” to start self medicating themselves. This could even be somehow related to the Dunning–Kruger effect, a cognitive bias brought forward in psychologists David Dunning and Justin Kruger’s 1999 study.\textsuperscript{13} The pupil who are still not yet competent at making decisions regarding diseases and therapy often incorrectly rate themselves as high-performers because they are ignorant to know otherwise.

More than half the respondents reporting that they would still self medicate even if they were not medical personnel, simply presents the idea self medication is something so common that even a layman would try self medication when needed. Certainly self medication with OTC drugs is a common thing among the general population at large. Recent advances in drug research have provided many medicines for the treatment of disease, leading to a drug explosion. Many of them have been released for general use, and are sold directly to the public as over-the-counter (OTC) products. A large number of potent drugs have thus been made available to the individual for self-medication. The consumer has no way to judge the efficacy of a drug or its hazards, and therefore these judgments have to be made for him by physicians. Adding fuel to it is the hazard is the availability of many irrational fixed dose combinations in the market, which exposes the individual to several drugs needlessly, each of which can cause adverse effects.

Private drug retail shops on the other hand are burgeoning throughout the country shadowing the use of homeopathic herbs and plants which these citizens depended upon for any ailment in bygone days. The Drug Act of Nepal was implemented in 1978, classifying medicines into various categories and regulating their usage. It is however a common discernment that the Act is not followed as exhibited in a study conducted by Wachter DA et al in 1999, where 97% of drug retailers were readily dispensing anti-microbial medicine as over the counter drugs(OTC) without clinical indications to mock patients staging three episodes of diarrhea. This result was contrary to national Drug Act’s guiding principle to limit dispensing anti-microbial medicines without prescriptions. Equally poignant reality was that the 100 randomly selected pharmacies taken for study were all located within the capital with best available health care facility throughout country Nepal.\textsuperscript{14} Another scenario was reported in result of a study conducted among residents of a valley (Pokhara) by Shankar et al in 2002 where
A colossal figure of 59% of the total subjects taken for study were self medicating.\textsuperscript{15}

Self-medication can account for idiosyncratic effects resulting in poisonings, allergy, habituation, addiction and various other adverse reactions. As people vary greatly in their sensitivity to drugs, an appropriate dose for one person could be an overdose for another.\textsuperscript{16} Even skilled physicians sometimes fail to avoid such reactions. Thus, the lay person is not advised to subject oneself to potentially dangerous effect of self-medication. Conversely, one must be clear in understanding responsible self-medication, as misunderstanding it can create predicament to any age group individuals; more likely the pediatric, adolescent and geriatric group.\textsuperscript{17}

\textbf{CONCLUSIONS}

High incidence of self medication among undergraduate medical students might be able to sense false entitlement of almost being a doctor with authority to prescribe soon. Also that, by the time any medical students reach final year, they are posted in clinical wards having completed pharmacology course. This ambiguous belief to have reached “know it all” stage to start self medicating could somehow be related to the Dunning Kruger effect, a cognitive bias brought forward in psychologists David Dunning and Justin Kruger’s 1999 study.

\textbf{CONFLICT OF INTEREST: None}

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