

Self-Medications Among Higher Educated Population In Bangladesh: An Email-Based Exploratory Study

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Abstract

Self-medication behaviours and trends of over-the-counter (OTC) medicine use among higher educated population in Bangladesh are still not investigated. This email-based exploratory survey was conducted to explore the nature of self-medication along with OTC medicine use patterns among literati of the country. The study found that the concept of "OTC medicine" or "rational use of medicine" is not well understood among the study population. Nearly, 83% of the respondents bought the same medicines for their family members. Majority (77%) of the participants sought advice from medicine sellers' to take medicines for minor ailments including common cold, allergy, mild fever or diarrhoea. Paracetamol was the mostly (80%) purchased OTC medicine by the respondents. Other medicines bought for self-medications were chlorpheniramine maleate, omeprazole, ranitidine, antacids, metronidazole, xylometazoline, vitamin C and multi-vitamin preparations.

INTRODUCTION

Self-care is a predominant therapeutic activity consisting 30-40% of the disadvantaged populations including women, elderly, ethnic minorities and poor in Bangladesh [1]. Self-medication as a mean of self-care through the purchase of over-the-counter (OTC) medicines is, and always has been common in the society for a wide variety of minor ailments, such as headaches, colds and indigestion. But such products can often be misused or abused [2]. Over-the-counter medicines have emerged as drugs of serious misuse across Bangladesh, and other neighbouring countries. One report estimates that there are 4 million drug misusers in the South Asian region, where Bangladesh accounts for half a million of the total [3]. Along with the common practices of self-medication, almost every drug store salesperson is illegally involved in the recommendation and sells of prescription only medicines in Bangladesh [4]. Self-medications in a country with low literacy level like Bangladesh is very important where prescription medicines are freely available. This may pose serious risks related to inappropriate and irrational personal use of medicines. Some sporadic studies reported awful self-medication behaviours among general populations in Bangladesh. But attitude toward and practices in self-medication among higher educated mass of the country is still unknown.

EMAIL AS HEALTH SURVEY TOOL IN BANGLADESH

With the advent of the World Wide Web and electronic mail (e-mail), the Internet has opened up new vistas in surveying [5]. Several methods exist for conducting Internet surveys but for projects of a limited scope and with a specific target population; email can be used exclusively to conduct online surveys [6]. Use of electronic surveys for health-related research is still in its infancy, though it provides exciting new opportunities such as easy access to samples, low administration costs and its unobtrusiveness and 'friendliness' to respondents. However, e-mail survey is constrained by its limited and biased population of users [7, 8]. The Internet came late to Bangladesh with connectivity in 1996. Despite the long presence, its scope is largely underutilized. The reasons include high service charges, lack of awareness, poor telecommunication systems, government policy, low buying power of potential clients, and lack of institutional support [9]. Internet penetration rate in Bangladesh is around 0.2% of the total population, which is much lower than the neighbouring countries [10]. Of the online services prevalent in Bangladesh, some 83% of the online time is used for e-mails compared to 12% for web browsing and 5% for reading newspapers respectively [9]. For this reason, the present study adopted email as a justifiable method for this online survey.

PURPOSE OF THE STUDY

Main objective of this study was to explore OTC drug use and self-medication patterns of the higher educated population of Bangladesh. Secondary purpose of this survey was to introduce 'email' as a health survey tool in Bangladesh perspective, where it has never been used in such cases.

MATERIALS AND METHODS

STUDY SUBJECTS

This survey used the judgmental sampling method with the understanding that the selected sample had higher educational background. The group mail address was selected from the yahoo group mail directory for Bangladesh. The selected group was an online forum involved in open discussion on various developmental issues of Bangladesh. Total number of this group mail was 105 during the survey period.

STUDY DESIGN

This exploratory study involved a simple email-based questionnaire survey. A pre-tested plain text questionnaire containing a cover letter stating the objective of this study was e-mailed as attachment file to the group mail account. Potential respondents were advised to submit the survey by recording their responses on a reply e-mail message or by completing the questionnaire and returning it via return e-mail. The questionnaire consisted of 10 questions mainly of dichotomous in nature while two were open ended.

DATA COLLECTION AND ANALYSIS

Data were collection was continued from September 05-20, 2006. The questionnaire was resent as remainder to the same address at the end of the first week. Data were mainly collected on the knowledge regarding OTC medicines and attitudes toward self-medication and practices. Descriptive statistics including mean, standard deviation and percentile were calculated using Microsoft Excel version Windows® XP professional as data analysis tool. No incentives were given to the respondents for their participation in this survey.

ETHICAL CONSIDERATION

The project was exempted from protocol review by the Academic Council for Human Subject Research of Patan Multiple Campus. Permission was obtained from the moderator of the group mail to after disclosing the purpose of this study. The respondents were notified that return of the completed survey would be considered evidence of their consent to participate in the research. The questionnaire

contained no identifiable features of the respondents. Email addresses of the respondents were kept confidential. The study was conducted in conformity with Helsinki Declaration of 1975 (as revised in 2000) and the e-Health Code of Ethics.

RESULTS

A total 30 completed questionnaires were returned within two weeks periods with a response rate of 29%. Most of the respondents inhabited at the capital city (Dhaka) and the remainders were from other cities. The mean age of the participants was 30.83 years, where the youngest was 23 years old and the oldest one being 41 years. Only a small proportion of women participated in this survey. Most of the respondents were post-graduate and were employed. Detail demographic characteristics of the study population have been given in the following table:

Figure 1

Table 1: Demographic characteristics of the study population (n=30)

| Location | |
|--------------------|----------------|
| Dhaka | 93% |
| Other City | 7% |
| Sex | |
| Male | 97% |
| Female | 3% |
| Age (Years) | |
| Range | 23-41 |
| Mean / (SD) | 30.83 / (4.32) |
| Education | |
| Graduate | 17% |
| Post-graduate | 83% |
| Employment History | |
| Employed | 87% |
| Unemployed | 13% |

Around 70% of the study population did not know anything

about the term 'OTC medicines' before this survey. But 80% believed that all medicines cannot be bought without doctors' prescriptions. All the participants mentioned the need for consultation with physicians to buy antibiotics like metronidazole or ciprofloxacin. Importantly, 83% of the respondents bought the same medicines (usually bought for themselves) for their family members without prior consultation with health professionals. The survey found that 67% of the participants did not have any idea about 'rational use' of medicines. It is important to note here that many (70%) of the respondents reported that they consulted physicians as first approach when got sick (other than common cold or allergy). Only 3% did not comment in this regard. In majority (77%) of the cases, the participants sought advice from medicine sellers' to take medicines for minor ailments including common cold, allergy, mild fever or diarrhoea. Paracetamol was the single most (80%) OTC medicine bought by the respondents. Other medicines bought for self-mediations were chlorpheniramine maleate, omeprazole, ranitidine, antacids, metronidazole, xylometazoline, vitamin C and multi-vitamin preparations.

DISCUSSION

Self medication with over-the-counter medicines has long been a feature of the lay health system and the current trend towards it seems unstoppable [11], especially in developing countries like Bangladesh. A better knowledge about the OTC medicines may largely minimize harmful effects related to their use. The present study, however, showed that majority of the respondents did not even familiar with the term 'OTC medicine'. The survey indicated a reasonable awareness about the attitudes towards medicine seeking behaviours of the study population as majority of them mentioned that it was not possible to buy all types of medicines without physicians' prescriptions. As a positive note, all the respondents believed that consultation with physicians were required to buy medicines like metronidazole or ciprofloxacin. It is worth mentioning that antibiotic resistance is increasing rapidly in Bangladesh due to irrational prescribing and inappropriate self medication by laypeople [12].

One important finding of the survey was purchasing of the same medicines by the participants for their family members including women and minor children. No prior advice was taken and no possible adverse effects were taken into account in this regard. Many of the respondents were not familiar with the concept of 'rational use of medicines' and only 3% could mention that irrational use of medicines may

cause 'side effects'. Though self-care is very common in disadvantaged population of Bangladesh [1] as mentioned earlier, majority of the participants in the survey contrarily stated consultation with physicians as 'first step' when they got sick suddenly other than minor illnesses. Medicine sellers play a vital role to encourage self-medication in Bangladesh. The survey population reported that most of the advice related to self-medication mainly came from medicine sellers of the drug stores.

Response rate of this email survey was quite low even after the reminder mail at one week interval. This may due to high service charges, lack of awareness, poor telecommunication systems, government policy and other factors [9] as mentioned above. But email may be a potential apparatus for health-related surveys in resource poor settings like Bangladesh as Internet is growing very fast and it is getting popularity in the country.

LIMITATIONS OF THE STUDY

Due to lack of fund, this study was conducted using email as the survey method. The sample in this survey was small, and was certainly not representative of the total population. Due to inadequate responses at the end of the first week, a second email with attached questionnaire was needed to resend as reminder.

CONCLUSION

This survey indicated that knowledge on OTC medicines and attitudes toward self-medication among higher educated population is not satisfactory. Large scale studies are required to investigate the actual trend and extent of self-mediations by people with higher literacy level in Bangladesh. This type of study may be highly important to devise effective mechanisms to minimize harms related to inappropriate or irrational medicine use.

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