

Awareness regarding risks of self-medication among people visiting community pharmacies

Devi Das,¹ Syed Imtiaz Ahmed Jafry,² Syed Muhammad Zulfiqar Hyder Naqvi,³ Kelash Kumar⁴

Abstract

A cross-sectional survey was conducted from April 2018 to February 2019 to assess the level of awareness regarding the risks of self-medication among people visiting the community pharmacies of Block-13, Gulistan-e-Johar, Karachi. Data was collected from 395 participants after taking their written informed consent by using a pre-tested questionnaire and analysed on statistical package for social sciences version 20. The study results showed that 186 (47.1%) participants were aware that drugs have side-effects, 242 (61.3%) knew that a drug can make a person dependent on it, 220 (55.7%) had the knowledge that long-term use of any medicine can be harmful to the body, 132 (33.4%) were aware that all over-the-counter medicines are not safe to use, whereas 178 (45.1%) believed that no medicine should be taken unless recommended by a licensed practitioner. It was concluded that many of the study participants did not have the knowledge regarding risks of self-medication.

Keywords: Awareness, Risk, Self-medication, Pharmacy.

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Introduction

Self-medication is a worldwide phenomenon that potentially contributes to the development of antibiotic resistance in human pathogens.¹ While antibiotic resistant bacteria are continuing to expand globally, new resistant strains are also emerging which have further complicated the treatment of infectious diseases.² It is a major public health problem and the main reason behind the development of this resistance is suspected to be antibiotic use,³ potentially as a consequence of non-compliance and self-medication. Self-medication has been defined as "the taking of drugs, herbs or home remedies on one's own initiative, or on the advice of another person, without consulting a doctor."⁴ In other words, it is the selection and use of

medicine by individuals to treat self-diagnosed conditions or symptoms. In developing countries, self-prescribed medicines are routinely purchased from pharmacies without professional advice.⁵ It has been argued that self-medication has several associated benefits, such as increased access to relief for the patient, an active role of an individual for his/her health care and reduced burden on government for treatment of minor illnesses.⁶ The potential effectiveness of self-medication is controversial though, because of a lack of medical follow-up, inadequate information provided by community pharmacists and/or incorrect diagnosis.⁷ Moreover, self-medication with any drug, with antibiotics being no exception, has been reported to be associated with various risks such as misdiagnosis, taking high dose, prolonged use, drug interactions and polypharmacy which may be particularly troublesome in the elderly.⁸ Apart from over-the-counter available drugs, sources of self-medication have been reported to include leftover drugs from earlier prescriptions or drugs taken from relatives or friends.⁹

As portrayed by available literature, the local picture in Pakistan is unfortunately not very different. A recent study conducted in Sindh found 81.25% of rural dwellers interviewed to practice self-medication of antibiotics, with economic reasons (88.0%) and easy availability of drugs from pharmacies (72.0%) cited as the most common reasons whereas a majority of them (74.7%) were not aware about the development of antibiotic resistance followed by their inadequate use.¹⁰ An earlier study carried out in Islamabad reported 61.2% of the respondents to practice self-medication with previous exposure and time-saving being the commonest reasons among urban population, while economic reason and lack of healthcare facilities being the commonest reasons among the rural population.¹¹ Efforts to curb the practice of self-medication among general masses may not produce the desired results unless their level of awareness regarding the harms of such malpractice is assessed and targeted for improvement. As most of the awareness data on self-medication from Pakistan is from studies conducted in educational institutions and thus

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¹⁻³Department of Community Medicine, ⁴Department of Operative Dentistry, Baqai Medical University, Karachi, Pakistan.

Correspondence: Devi Das. Email: devidas9489@gmail.com

offers a limited generalisability, establishment of a baseline estimate among general population is imperative. In the given context, this study was conducted to assess the level of awareness regarding risks of self-medication among people visiting the community pharmacies of Block-13, Gulistan-e-Johar, Karachi.

Patients/Methods and Results

After taking necessary ethical approval, a cross-sectional awareness survey was conducted from April 2018 to February 2019 among people visiting the community pharmacies of Block-13, Gulistan-e-Johar, Karachi. Keeping the percentage frequency of the study outcome at 50% for maximum sample size estimation, with 95% confidence interval and 5% precision, the required sample size was calculated to be 385 participants. Out of a total of 12 community pharmacies in Gulistan-e-Johar, Block-13, four pharmacies were randomly selected. Total sample size ($n=395$) was equally divided on selected pharmacies. The required number of participants aged 18 years or above visiting the selected pharmacies was conveniently included in the study, while those who refused to give written informed consent were excluded from the study. After checking eligibility, all participants were interviewed by the principal investigator using a structured questionnaire designed specifically for the study. The questionnaire was developed in English, was translated to Urdu, and then translated back to English. It was pre-tested on 5% of sample size to check for face validity and reliability and was modified accordingly to yield a Cronbach's alpha value of 0.808 indicating a high degree of internal consistency. Data were entered and analysed on statistical package for social sciences (SPSS) version 20. Descriptive analysis was performed by calculating frequencies and percentages for categorical variables and means and standard deviations for continuous variables. The total duration of the study was nine months.

A total of 395 participants were included in the study with a response rate of 100%. The mean age of the study participants was 33.79 ± 11.73 years, 350 (88.6%) were male, 349 (88.4%) were Muslim, 136 (34.4%) had education till intermediate, while 132 (33.4%) were graduates or post-graduates. A total of 235 (59.5%) lived in joint family system, 295 (74.7%) were employed, 224 (56.7%) were married, 151 (38.2%) were Urdu speaking, while 143 (36.2%) were Sindhi speaking. The monthly income of 171 (43.3%) was <25,000 rupees while 120 (30.4%) were earning between 25,000 to 75,000 rupees per month. The study results further revealed that 263

(66.7%) participants were aware that drugs are chemical compounds, 186 (47.1%) knew that drugs have side-effects, 222 (56.2%) had the knowledge that a drug can negatively affect the functions of the body and 242 (61.3%) were aware that a drug can make a person dependent on it. Long-term use of any medicine causing harm was known to 220 (55.7%) participants and 176 (44.6%) believed that drugs may lose their effectiveness because of this factor. All over-the-counter medicines were not safe, was believed by 132 (33.4%) individuals, 178 (45.1%) knew that no medicine should be taken unless recommended by a licensed practitioner, 226 (57.2%) were familiar with proper dosage and duration of the medicines they used whereas 176 (44.6%) were aware that a drug should only be purchased from a pharmacy registered by the Pharmacy Council of Pakistan.

Conclusion

Like our study results, Aljadhey H et al, in 2015 found that a majority of the participants interviewed were familiar with the dosage of the medicines they purchased.¹² Sharma R et al, in 2005 though reported dissimilar results.¹³ This difference in findings could be attributed to different characteristics of the populations studied. Regrettably though, not even half of the study participants were aware that it is necessary that a drug seller should be a pharmacist. In the absence of such crucial information, general public cannot be automatically assumed to have made right choice of pharmacies. Alarmingly, more than a third of the study participants were found to be completely unaware of the methods of drug excretion from the body, making them potentially vulnerable to self-medication because of a lack of knowledge of any potential toxic effect of drugs on the organs responsible for their excretion.

Though it can be argued that inadequate knowledge of the above mentioned factors may not be the only reason behind the commonly observed trend of self-medication in Pakistan,^{10,11} serious efforts on part of all stakeholders may nevertheless play an important role in putting a stop to this malpractice by increasing awareness among general masses about the potential harmful effects of self-medication.

It is acknowledged that people visiting community pharmacies are not an ideal substitute of the general population, but the resultant estimates could nevertheless provide a better assessment of the prevailing situation than that currently available in Pakistan.

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