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Patterns of Self Medication Among Educated and Uneducated Population in a University Setting in Lahore Pakistan: A Cross Sectional Survey

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Abstract

Background and Objective: Self-medication is gaining attention and is becoming a public health concern. Malpractice of self-medication is associated with risks such as misdiagnosis, overdose, prolonged duration, drug interactions and poly-pharmacy; which causes increased burden on the individual and is problematic in the elderly. This study evaluated the prevalence and patterns of self-medication among Educated and Uneducated population in a university setting in Pakistan.

Methods: A descriptive cross- sectional study was conducted in 100 individuals (educated: 50 and uneducated: 50). A questionnaire was filled consisting questions related to symptoms that necessitate self-medication, motive for self-medication and the sources of information about medication.

Results: There was no significant difference in prevalence of self-medication in educated (68%) and uneducated samples (60%). Headache (32%), fever (30%), cough (16%) and gastric problems (8%) were the common symptoms for which self-medication were sought. However, Self-mediation for headache (36% vs 28%) and fever (32% vs 28%) was significantly higher in uneducated vs educated sample. The main reasons to self-medicate among educated population vs uneducated included conditions not serious (48% vs 32%); lack of time (48% vs. 20%), whereas, 44% uneducated reported to save money as compared to 4% educated sample. The common source for self-medication in both the samples were past experience (56%) and advice from others (24%), however, advertisement as a source of self-medication prevailed in uneducated sample (20%) as compared to educated sample (8%).

Conclusion: Self-medication is prevalent in educated and uneducated population. The drug authorities must regulate policies to provide safe and cost effective products, in particular to safe antibiotic usage and prevent adverse effects of drugs. Standards should be applied to the provision of information and advertisement to ensure responsible self-medication.

Keywords: self-medication, educated, uneducated

INTRODUCTION

Self-medication involves the use of medicinal products by the consumers to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms [6]. It has also been defined as obtaining and consuming medication without professional supervision, which

comprises of acquiring medicines without a prescription, purchasing drugs by resubmitting/ reutilizing an old prescription, taking medicines on advice of relative or others, or consuming left-over medicines already available at home[2].

Self-medication is globally practiced with varying degree.Asystematic review done by Montgomery et al., self-medication prevalence rate was greater than 50%. Self-medication can result in severe health-related complications when implemented inappropriately without any regulations. For instance, resistance to antibiotics is of great concern due to frequent and inappropriate use.Resistance prolongs illnesses and hospital stays, and can even cause death, leading to costs of US$ 4–5 billion per year in the United States of America and €9 billion per year in Europe. Moreover due to irresponsible self-medication, consumer can be at potential risks of incorrect self-diagnosis, masking underlying disease, incorrect choice of therapy, overuse/underuse, unnecessary prolonged use, risk of dependence and abuse, therapeutic duplication, polypharmacy and severe adverse effects. Consequently, it could result in an increase in drug-induced disease and in wasteful public expenditure causing increased economic burden.

Irrational use of drugs is a wide spread public health concern. The alarmingly high prevalence rates (68% in European countries), while much higher in the developing countries needs to be addressed. Research showed that the trend to practice self-medication is higher in literates as compared to illiterates. Despite this, self-medication is scarcely focused in Pakistan and insufficient measures have been taken to address this problem. One study discussed over-the-counter availability of antimicrobial agents, self-medication and patterns of resistance [5] and suggestedcontinuous education of health care professionals to control misuse of antimicrobials. The goal of this study is to discern the attitude and practice towards self-medication between educated and uneducated population and suggest measures that can be employed to promote responsible safe self-medication.

METHODOLOGY

A cross-sectional survey was conducted in University of Lahore during April 2013. The study population was adults (over 16 years old) living in Lahore City. A convenience sample of 100 participants, 50 educated and 50 uneducated was taken by approaching them. A questionnaire was developed using combination of open-ended and close-ended questions from various previously conducted similar studies. Questions included the symptoms for which medication were being used; the types of medication; the duration of use; the reasons for self-medication; the sources of information about medication. Socio-demographic characteristics involved gender, age, marital status, education, occupation. Workers in the university mainly sweeper, gardener, guards and maids were approached that constituted the uneducated population. The data collector read the questions and wrote the answers on behalf of the uneducated participant. Similarly students, lecturers and hostel mates of different disciplines comprised the educated population. Data management and analysis was done on SPPS version 18. Descriptive statistics has been applied. Variables included age, gender, type of medication, condition for which medication was used, duration, other conditions for which self-medication is practiced, source and reasons of self-medication. Frequency tables and bar charts have been analysed.

RESULTS

100 participants aged between 16-70 years were approached. The mean age of educated and uneducated participants was 24 years and 40 years respectively. In our survey 48% (n= 24) comprises of female uneducated population while 52% (n = 26) were uneducated male. Among educated population, 60% (n = 30) were female and 40% male (n = 20).

There was no significant difference in prevalence of self-medication in educated (68%) and uneducated sample (60%). Few responders have found to be taking homeopathic and herbal medication as their first choice of treatment alternative to allopathic medicine. The main reason for taking homeopathic and herbal medicine reported to be a safer type of medication and easy availability of herbal products at home. The type of medication

was unambiguous in uneducated population because most of them were unaware of the name of medication and reported the medication was given by the retailers at medical store after being informed of their condition.

Headache (32%), fever (30%), cough (16%) and gastric problems (8%) were the common symptoms for which self-medication were sought. However, Self-mediation for headache (36% vs 28%) and fever (32% vs 28%) was significantly higher in uneducated vs educated sample. The uneducated retired guards have been observed to be taking analgesics for no reason on daily basis for mere satisfaction. Reported medicines included dispirin, panadol, bruffin, ponstan, flagyl, augmentin, arinac, cough syrups, vitamin supplements, flagyl, omeprazole and various similar brand alternatives. In other conditions pain at different body parts, lethargy and sedation were reported. One case reported gastritis but claimed NSAIDS necessary to take relief from pain. One individual mentioned eccentric behaviour for antibiotic self-medication, taking one antibiotic for one day and other antibiotic the other day without completing any of the courses. Some medications were taken daily by some of the individuals which became their habit and reported they feel lethargic if they don't take the medication.

The main reasons to self-medicate among educated population vs uneducated included conditions not serious (48% vs 32%); lack of time (48% vs 20%), whereas, 44% uneducated reported to save money as compared to 4% educated sample. One of the uneducated female reported the inaccessibility of physician. One uneducated male reported that physician usually panic the patient by creating an alarming state. One educated female reported that she usually self-medicate for a known disease as the physician is to prescribe the similar medications (Table 1).

Table1. *Reason for self-medication*

		Frequency	Percent
uneducated	lack of time	10	20.0
	save money	22	44.0
	problem not serious	16	32.0
	others	2	4.0
	Total	50	100.0
educated	lack of time	24	48.0
	save money	2	4.0
	problem not serious	24	48.0
	Total	50	100.0

The common source for self-medication in both the samples were past experience (56%) and advice from others (24%), however, advertisement as a source of self-medication prevailed in uneducated sample (20%) as compared to educated sample (8%) (Table 2).

Table2. *Source*

		Frequency	Percent
uneducated	Advertisement	10	20.0
	heard from others	12	24.0
	past experience	28	56.0
	Total	50	100.0
educated	advertisement	4	8.0
	heard from others	12	24.0
	past experience	28	56.0
	others	6	12.0
	Total	50	100.0

DISCUSSION

Self-medication involves the use of medicinal products by the consumers to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms [6]. Easy availability of the drugs over the counter facilitates self-medication [21]. This leads to inappropriate self-medication masking the sign and symptoms of underlying disease thereby delay in diagnosis. Although there was no significant difference in prevalence of self-medication in educated and uneducated participants, the scope and duration of self-medication can be kept within safe limits by limiting the package sizes or dispensing dosages for not more than 3 days to avoid stocking of medication at home and avoid prolonged use. The community pharmacies should keep a record of their community prescription medications to avoid therapeutic duplication and polypharmacy. Government should disseminate effective education of self-medication to protect from possible harm and long-term adverse effects of medications. There should be a culture of reporting adverse drug reactions by consumers through pharmacies by giving necessary information to consumers about adverse drug reactions of products and when to report. Promotional messages through the media and the Internet should be utilized for this purpose. Advice to the consumer/patient should include a description of how to use the product without medical supervision and the circumstances in which referral for medical advice is necessary [3]. Inappropriate use of antibiotics increases antimicrobial resistance and render medicines ineffective against infectious disease. Governments should recognize and enforce the distinction between prescription and non-prescription medicines [10]. Therefore, drug authorities should restrict antibiotics as prescription only medicines.

CONCLUSION

Self-medication is prevalent in educated and uneducated population. The drug authorities must regulate policies to provide safe and cost effective products, in particular to safe antibiotic usage and prevent adverse effects of drugs. Standards should be applied to the provision of information and advertisement to ensure responsible self-medication.

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