

Full Length Research Paper

Survey based study on the use of non-prescription drugs among pharmacists and non-pharmacists

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The aim of this study was to determine the attitude of pharmacists and non-pharmacists in Karachi towards the use of non-prescription medicines. A cross-sectional survey was conducted from August 2012 to October 2012 among pharmacist and non-pharmacists. Data was analyzed and results were compared using Chi-square test with the help of statistical software package (SPSS version 19). Overall prevalence of self-medication was found to be 81.28%. Factors like busy life schedule (27.58%), previous experience of medicine (20.68%) and better drug information (20.86%), contributed differently in promoting self medication to pharmacists, whereas busy life schedule (45%), was one of the major factor of self medication among non pharmacist. The major clinical conditions in which self medication was observed in the pharmacists were flu (36.9%), pain (27.59%), fever (25.86%), diarrhea (24.14%) and headache (22.07%), whereas in the non pharmacists, the main conditions were headache (55.71%), diarrhea (53.33%), fever (35.71%) and flu (35.24%). Self-medication was commonly observed both in pharmacist (62.08%) and non pharmacist (71.43%) in Karachi, but there was a significant increase in non pharmacist ($\chi^2=4.756$, $p<0.05$). In order to control this prevailing problem, legislation are to be made by the government especially to implement and facilitate the prescription system, conducting awareness programs and restricting drug advertisements for public.

Key words: Pharmacist, non-prescription drugs, self medication.

INTRODUCTION

Self-medication has been defined in various ways as the act of procurement and consumption of pharmaceuticals without consulting medical practitioner (Montastruc et al., 1997, Loyla Filho Al et al., 2004). Self-medication trends in different regions of the world are high (WHO., Bradley and Blenkinsopp, 1996) like in India, it is 31% (Deshpande and Tiwari, 1997) and 59% in Nepal (Shanker et al., 2002) and it is alarming despite the efforts made to curb this problem (Hsiao et al., 2006) it increases day by day both in developing (Geissler et al., 2000; Parimi et al., 2004; Awad et al., 2005; Souza et al., 2005; Volpato et al., 2005; Al-Azzam et al., 2007; Sawair

et al., 2009) and developed countries (Greenhalgh, 1987; Richman et al., 2001; Borg and Scicluna, 2002; Strachounski et al., 2003; Mitsi et al., 2005; Väänänen et al., 2006; Grigoryan et al., 2007).

Various researches have demonstrated that self medication is more pervasive among females victimized by either loneliness or psychological problems or low socio economic class female and among students as well (Figueiras et al., 2000; Shankar et al., 2002; Nordeng and Havnen, 2005).. The abuse of medications is more common in youth and it might be due to pharmaceutical industries media advertisement strategies. This raises

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flawed self assessment, drug interaction and misuse (Burak and Damico, 2000). There has been an increasing tendency of self medication behavior among various health sciences graduates and students including doctors, pharmacists and nurses were found in different regions of the world (Nalini, 2010; Gutema et al., 2011; Ritu et al., 2011; Souza et al., 2011; Banerjee and Bhadury, 2012).

Previous studies have concluded that the rates of self medication were up to 51% in Pakistan alone back in 1995 (Haider and Thaver, 1995), out of which 76% of self medication was practiced in Karachi (Zafar et al., 2008) and 41% in Islamabad (Hussain and Khanum, 2008).

The most commonly available over the counter (OTC) medicines in Karachi are analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), anti histaminic, vitamin supplements, tonics, cough and cold remedies. Although, these medications are considered safe, but their excessive use can lead to serious adverse effects. Almost all prescription only medicines are easily available as OTC medicines in most retail pharmacies in Karachi without showing the prescription and so far no major steps have been taken by the responsible authorities to address this serious issue (Chang and Trivedi, 2003). In the present study, self medication was comparatively evaluated among pharmacists and non pharmacists in this highly populated city of Pakistan.

METHODOLOGY

Study design

This study is a cross-sectional study done in Karachi, Pakistan.

Study population

This study was carried out mainly at University of Karachi, one of the largest universities in Pakistan. Data was also collected from other public and private sector universities of Karachi, Ziauddin Medical University and Dow University of Health Sciences. A total of 290 pharmacists working in hospitals, retail pharmacies, Industries and studying in pharmacy institutes with age range 21 to 35, were selected randomly. Non pharmacist group was also selected randomly with the same age range, with minimum qualification of graduation, working in public and private sector universities, allied hospitals, pharmacies and industries. An appropriate time for the filling of proforma was given to the participants. The questionnaire assessed the brief details of participants and the prevalence and practice of self-medication.

Study tool

The data was collected through the proforma designed by considering various studies conducted in different regions like Spain, Iran, Italy, etc. The proforma consisted of initial demographic information of the participants and 23 questions covering the following areas: profession, monthly income, amount consume for health purpose, last consultation with medical practitioner, travelling distance to hospital, practitioner's fee, self medication frequency, reason and reliability, type of medication used, clinical condition for self medi-

cation, episodes of illness, perception of role of pharmacists for self medication, and outcome of self medication.

Study period

About 500 participants completely filled the questionnaire from August 2012 to October 2012.

Data analysis

Data was analyzed statistically using software SPSS version 19 and Chi square test was applied to identify the significant association among variables.

Ethical approval

Permission was obtained before conducting the study from the ethics committee of the institution as well as university administration. The purpose of the study was explained in details to the participants and confidentiality was ensured. Written informed consent was obtained from every participant before filling the questionnaire.

RESULTS

The response rate from the participants of this study was 96.2%. The participants were with a mean age of 21 to 35 years among which 290 were pharmacists and 210 were non-pharmacists. Almost 60% participants were females and 40% were male and the overall prevalence of self-medication was found to be (n=406) 81.28%.

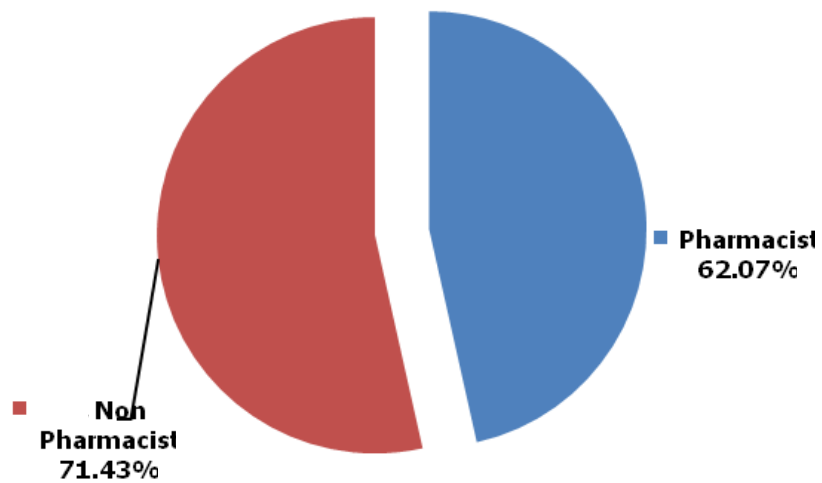
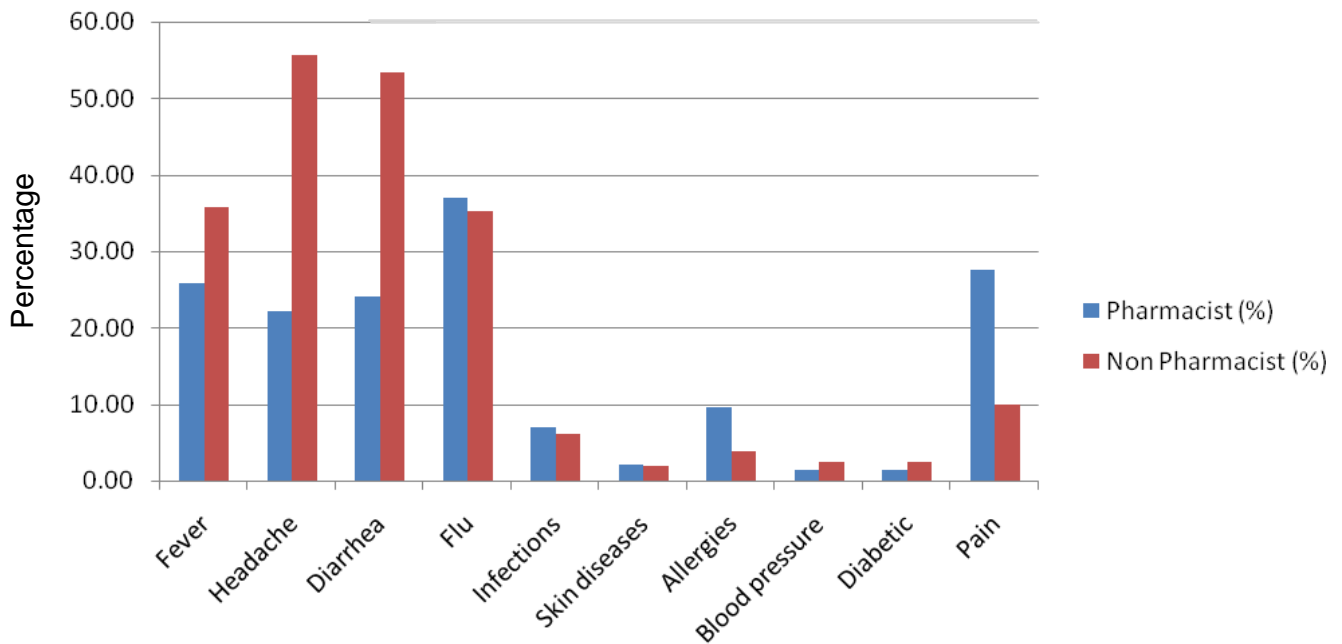
This study reports that the practice of self-medication among pharmacists and non pharmacist was 71.43 and 62.07%. The prevalence of self-medication was found to be more significant ($\chi^2=4.756$, $p<0.05$) in the non pharmacist community as compared to pharmacists (Figure 1).

The most common factors contributing to self medication among pharmacists and non pharmacist observed in this study was busy life schedule, previous experience of medicine, doctors attitude, better knowledge, easy access, travel distance and physician fees (Table 1). Self medication among non pharmacists were higher due to the aforementioned reasons and there was a significant difference ($\chi^2=17.458$, $p<0.05$) due to busy life schedule, doctors attitude ($\chi^2=11.866$, $p<0.05$), easy access ($\chi^2=15.017$, $p<0.05$), better knowledge ($\chi^2=27.395$, $p<0.05$) and travel distance ($\chi^2=5.815$, $p<0.05$). There was no significant difference among the two groups for self medication due to previous experience ($\chi^2=0.207$, $p<0.05$) and doctors fees ($\chi^2=4.756$, $p<0.05$).

Major condition in which self medication was observed in present study among pharmacist and non pharmacist group was fever, diarrhea, flu, headache and other pains (Figure 2). Drugs commonly used for self medication were antibiotics, analgesics, anti allergics, anti diarrheal, and cough preparations (Figure 3).

Table 1. Factors contributing to Self-medication.

Factor	Pharmacist		Non-Pharmacist	
	Frequency	%	Frequency	%
Busy life schedule	80	27.58	96	45.7
Had experience before	60	20.69	47	22.38
Doctor s attitude	30	10.34	5	2.38
Better knowledge	60	20	89	42.38
Easy access to medical store	44	15.17	62	29.52
Travel distance	20	6.89	28	13.33
Doctors' fees	75	25.86	67	31.90

**Figure 1.** Self medication behavior among pharmacist and non pharmacist.**Figure 2.** Common indications for self medication.

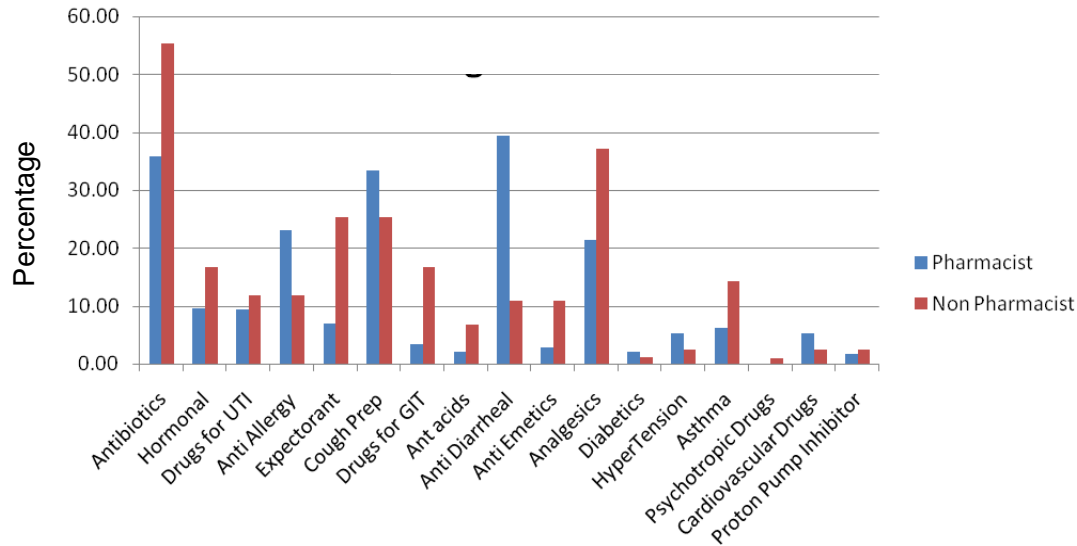


Figure 3. Drug used for self medication.

The surprising and disappointing fact of our study is that there is a considerable number of pharmacist involved in self medication for these conditions where physician advice is necessary.

DISCUSSION

In Spain and Turkey, the ratio of self-medication was 12.7 and 45% (Figueiras et al., 2000). In Hong Kong, it was 94% (Chang and Trivedi, 2003). This indicates that self-medication is not only practiced in poor countries, but also in developed countries despite knowing the harmful effects of medicines. Among health care persons such as nursing graduates in Brazil, it was 38.8% (Souza et al., 2011), undergraduate medical students in West Bengal was 57.05% (Banerjee and Bhadury, 2012). Among pharmacist in India and Ethiopia, it was 67 and 38.5%.

Ritu et al. (2011) observed that 68% of the pharmacist take medicine by themselves due to minor illness and 13% due to easy availability of the drugs (Ritu et al., 2011). Abay and Amelo (2010) reported previous experience and minor illness was the major reason for self medication among pharmacist and other health care personnel (Abay and Amelo, 2010).

Some authors reported that previous experience was one of the major reason for self medication besides non availability of doctors and transport, ability to self manage, urgency to treat, assumption of better knowledge, lack of time and cost of treatment were the other contributing factors (Sogunro and Ogunremi, 1980; Lau et al., 1995; Hussain and Khanum, 2008; James et al., 2008; Sawalha, 2008; Zafar et al., 2008; Almasdy and Sharif, 2011).

Abay and Amelo (2010) reported fever, headache, cough and cold to be the major condition and NSAID's

and paracetamol were the major class of drugs for self medication (Abay and Amelo, 2010). In India, self medication was practiced like in Pakistan where 53% take antibiotics without prescription and cough, cold fever and headache were the major conditions where pharmacist took medicine without taking prescription (Ritu et al., 2011). Gutema et al. (2011) also observed that among health sciences student where headache, cough and cold were the major condition, NSAID's and paracetamol were found to be the most consumed drugs in self medication (Gutema et al., 2011). Though self-medication is widely practiced throughout the world and may be helpful in treating minor common ailments, but this practice should be based on proper medical information, otherwise irrationally using drugs may lead to serious health hazards, adverse drug reaction and increase resistance to pathogens (Banerjee and Bhadury, 2012). For this purpose, prescription system should be more strengthened by provided support by the government. Drugs such as antibiotics and others which may be very harmful if not taken properly and it should not be available to the patients without prescription. These practices may lead to drug abuses and addiction and may alter the effects of other drugs. The attitude of self medication among pharmacist was also observed in neighboring country like India where antibiotics were among the most commonly used drug for self medication (Ritu et al., 2011).

Conclusion

The prevalence of self-medication practice is remarkably high in the educated community of Karachi and is nearly same among pharmacists and non-pharmacists despite the fact that majority of the people know that it may be

risky. On this basis it can be assumed worse situation in smaller cities and villages where there is low literacy rate. This calls for proper awareness training programs nationwide, restricting unnecessary drugs' advertisements, check and balance on pharmacies regarding OTC products and prescription only drugs and ensuring access of common man to essential drugs without burden of heavy doctors' fee.

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