

Students' Attitude towards the use of over the Counter Drugs during Exams in Peshawar, Pakistan

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Abstract

The purpose of over the counter medications is the feature of a mounting progress towards medical self-care and has been an instrument to increase control over one's health. Many studies demonstrate that among the general population, over the counter (OTC) drugs are dominantly used in adults. In this study, we identified the application of "OTC" medicines and their effect on the students during examination in district Peshawar. The survey was held based on a random sample of 350 students with 10+ years of age (172 male and 178 female). Data were collected through a well-designed questionnaire from educational institutions of Peshawar by using stratified random sampling to investigate different factors that influence the use of "OTC" medicines. For statistical analysis of the data SPSS software was used. Statistical tools like "Chi-square test" and cross tabulation was utilised to test the association of different factors and their significance with "OTC" drugs. The finding of the results shows that the using "OTC" medicines during examinations, is generally higher among males students ($p=.001$). Lack of awareness and easy access were found to be significantly affecting the intake of "OTC" medicines.

Key Words: self-medication, chi-square test, cross tabulation, OTC drugs

Introduction

"Self-medication" has become a crucial health issue in the developing world as it has enormously affected the health of the public and community. "Self-medication" is the main constituent of self-care and is thought of as primary public health resource in the healthcare system in Pakistan. It is the option and intake of medicines by individuals to treat self-recognised sickness or indication of symptoms. Medicines for self-medication are frequently known as "non-prescription" or "over the counter" (OTC) and are accessible without a doctor's prescription through pharmacies (Hastings, 2006)

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Drugs in pharmaceutical market are split into two categories i.e. prescription and non-prescription drugs. Prescription drugs are those which cannot be dispensed without a prescription from an authorized medical professional (Siecker and Bruce, 2002). Non-prescription drugs are that which are available without a prescription. They often provide transitory alleviation from uncomplicated soreness and are considered sufficiently safe to be purchased by users based on their personal discretion (Barrett, et al. 2002). Medicine handed directly to a forbearer without a prescription from a healthcare professional, that are risk-free are known as over the counter (OTC) drugs (Nagalingam, 2014). Throughout the world, self-medication practices are often considered as over the counter (“OTC”) medications (Loyola Filho et.al, 2004). Over the counter medications only useful when taken with care. The associated risks with the use of “OTC” medicines or some side effects may happen even if utilized correctly; in fact, taking “OTC” medications increase the probability of drug-drug interactions, with the inclusion of interactions with alcohol (Hernandez, Lyla M, 2008). In most of the less developed countries of the world, almost all drugs are available in the grocery and may be purchased with ease. This tendency is growing among the new generation and is very common among university students. A lot of studies have observed the clinical reasonableness of prescription patterns and self-medication, inclusive of “OTC” drug use (Gutema, 2011). One of the previous studies detailed that 38% participants exhausted “OTC” drugs. It was seen that a lot of them consumed a non-prescription drug (at most one) along with some other prescribed medications (Yousef et.al, 2008).

Now days individuals with worsening health initially try to help themselves, by means of “OTC” medication (Indermitte et.al, 2007). In addition, sympathy feelings towards their family members during sickness, deficiency of health facilities, bad financial condition, misbelieves, lack of knowledge, broad range of commercial and accessibility of drugs in other than drug-stores are the responsible factors for increasing the tendency of self-medication (Williamson et.al, 2008). There has been a growing inclination of self-medication conduct among several health science graduates and students including doctors, pharmacists and nurses were found in various locations of different countries in the world (Nalini, 2010). The abuse of medications is much common in youngsters that could be due to media advertisement

strategies of pharmaceutical industries. This increases blemished self-assessment, interaction of drug and misuse (Burak et.al, 2000). Several researches have verified that self-medication is highly persistent in females displeased by solitariness or psychological issues or low level socio-economic category females as well as students (Figueiras et.al, 2000). Additionally, the internet has also become a popular source for users to get pharmaceuticals information (Fox et.al, 2003). On the other hand, a user may use advertisement and interpersonal medias to get a non-prescription drug information as an experience product because advertisement can furnish an assistance to buy decisions prior to purchasing it and interpersonal medias can supply information about individual experiences with the non-prescription drug in question (Creyer et.al, 2001).

Despite of the fact that self-medication is used all over the world and may be instrumental in recovering insignificant ailments, merely this exercise should be based on proper information of medicine, otherwise, drugs may lead to serious health risk, inauspicious drug reactions and growth against microorganism (Banerjee and Bhadury, 2012). The hazards related to “OTC” drugs are improper self-diagnosis, magnified hazard of drug-drug interactions and inauspicious events and potency for abuse and misuse (Brass and Eric, 2001). Another big menace hazard of “OTC” drugs is the evolution of antimicrobial resistance especially in developing countries where antibacterial is oftentimes accessible without a prescription (Sturm et al, 1997). Likewise, hypersensitivity, digestive bleeding, hazard of neoplasia and improper behaviour of administration are some of the hazard components related with self-medication (Jain et.al, 2011). Those who abuse drugs regularly are also a bigger hazard related educational issues, health problems; poor match kinships, and issues with law enforcement (Bryner et.al, 2006). A large number of people and numerous health professionals in primary care settings, prescribe non-prescription “OTC” medicines, for example, to cure cough, for their children or themselves, to people as a first-line treatment (Smith and Jaclyn, 2004). Additionally, self-medication has also been observed among the European people, specifically in southern and eastern European countries and in the United States (Mainous et.al,

2005). Improper intake of “OTC” drugs may also contribute to antibiotic resistance (Guillemot et.al, 1998).

Research Methodology

The data was collected through a well-designed questionnaire from 350 students in Peshawar. The data was then processed and analysed using statistical package for social sciences (SPSS). For the purpose of analysis, statistical tool like Chi-square test and cross-tabulation was used to check the association of the OTC drugs with different factors that influence its use. Frequency distribution was used to estimate the percentage of students who are addicted to the drug’s use during survey.

Results

In this section results calculated from the collected data are discussed by using descriptive statistics; the frequencies and Chi-square test. The detail of the results is given below in Table 1 (Frequency Distribution) and Table 2 (Chi-square).

Table-1. Frequency Analysis of the Students Data

Variable	Categories	Frequency of Respondents	%age of the Respondents
Age Group	10-19	173	49.4
	20 and above	177	50.6
Gender	Male	172	49.1
	Female	178	50.9
Qualification	Metric	79	22.6
	Inter	87	24.9
	Undergraduate	75	21.4
	Graduate and above	109	31.1
Area status	Rural	176	50.3
	Urban	174	49.7
Family income	<10000	29	8.3
	10000-25000	82	23.4
	>25000	239	68.3

Table-2: Chi-Square Analysis of OTC drugs and their effects

Variable	Categories	Use of OTC drugs		Chi-square (χ^2)	p-value
		Yes n(%age)	No n(%age)		
Gender	Male	133(77.3%)	109(61.2%)	10.61	.001
	Female	39(22.7%)	69(38.8%)		
headache during exam	Yes	196(92.5%)	46(33.3%)	1.36	.000
	No	16(7.5%)	92(66.7%)		
Use of OTCs by my contemporaries	Yes	154(79.0%)	88(56.8%)	19.94	.000
	No	41(21.0%)	67(43.2%)		
headache that cause sleeping uproar during exam	Yes	142(80.7%)	100(57.5%)	22.09	.000
	No	34(19.3%)	74(42.5%)		
use of energy drinks during exam	Yes	149(75.6%)	93(60.8%)	8.90	.003
	No	49(24.4%)	60(39.2%)		
The sedative effect of antihistamines makes people misuse during exam	Yes	115(77.7%)	127(62.9%)	8.80	.003
	No	33(22.3%)	75(37.1%)		
The availability of OTC medicines and the belief in its safety leads me to use them a lot during exam	Yes	168(79.2%)	74(53.6%)	25.72	.000
	No	44(20.8%)	64(46.6%)		
Excessive uses of painkiller are safe during exam	Yes	167(73.2%)	75(61.5%)	5.16	.023
	No	61(26.8%)	47(38.5%)		

Table 1 represent the frequency and percentage of the respondents. It is evident from the table 1 that out of the overall data collected 49% student were male and 51% were female. From table 2, it is evident that “Gender” plays significant role in using OTC medicine (Chi-square =10.614, p-value 0.001). It is also concluded that OTC drugs use were found to have significant associated with the area status as more students who belong to rural areas as compared to urban use OTC more frequently (Chi-square=14.195, p-value 0.001). The results also indicate that there is a significant difference among the views of respondents because most of the respondents were using OTC “During exams” (Chi-square value is 1.369 having p-value 0.000). The results also indicate that the use of “OTC” by an individual is related to his/her mates (Chi-square value 19.948 and having the p-value 0.000). Furthermore, it is clear that majority of the students use OTC by “Suggestion of their colleagues”. The variable about “The use of painkiller to reduce pain” is also important factor of the study which is significant and indicates that there is an association among different respondents with “different medicines” (Chi-square=22.093, p-value is 0.000). It is also evident from the results that there is a significant association between “OTC” use and “energy drink” consumption in the respondents (Chi-square value 8.901 and having p-value 0.003). The variable “Students feel relaxed with the use of over the counter medication” indicates that it has a significant effect on OTC (Chi-square value 8.807 and having the p-value 0.003). “Availability of over the counter medicines” indicates that it has a significant effect on OTC (Chi-square value 25.720 and having the p-value 0.000). The variable “Excessive uses of painkiller” is also significant and indicated association between “OTC” effect and “Excessive uses of painkiller” (Chi-square value 5.160 and having the p-value 0.023).

Besides these significant variables which have strong effects on “OTC” use, there are also some variables which are insignificant and has no effect on OTC for example Age, Education, Advertisement, Sedative effect, Use of herbal/natural products, Long term use OTCs, Overusing of Panadol, NSAID, Read medication leaflet, To reduce the hazard of serious side effects, etc.

Conclusion

This study is designed to enquire the application of “OTC” medicines and its effects on our society. Data was collected from different educational Institutes in Peshawar. After collecting the data, it was tabulated, analysed and interpreted. The relevant study findings verify the broad use of “OTC” Medications during examinations. The application of “OTC” NSAIDs was greater among female high school students of age 16–18 years. All the students were found to have awareness of the OTC medication and its impact on their physical and mental behaviour. The current study highlights that majority of the student reported to have an easy to access to the OTC drugs and they are freely available. Similarly, junior students’ participation in pre-social activities and its impact their involvement in OTC drug use is not statistically significant, whereas high school students who reported high levels of involvement in pre-social activities were significantly less likely to be involved in OTC drug use. Therefore, it is highly recommended that in order to reduce the self-medications and over the counter drugs use and its impact on the overall society, it is critical to and important to restrict students as well as young generation to have free access to these drugs and that these medications be properly secured to reduce access. It is also recommended that proper awareness may be created among students and society regarding the implications of these drugs. Similarly, strategies may be devised by the Govt to avert the supply of medicines without doctor prescription by pharmacies.

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