RESEARCH ARTICLE

Need of Medicines Information OPD in Tertiary Health Care Settings: A Cross Sectional Study

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ABSTRACT

Background: Population burden, illiteracy, availability of few doctors for larger group of population all these leads to many unanswered questions left in a patient's mind. Incomplete information results into noncompliance, therapeutic failure, and adverse drug reactions (ADR). It is very important to establish a system which will provide noncommercial, independent, unbiased source of medicine information. Medicines Info OPD is a concept and step towards safe and appropriate use of medicines.

Objective: (1) To assess the present status of knowledge about the medicines in the patients and its correlation with education. (2) To assess the medicine information dispensing modalities, their use and sufficiency from the patients view point. (3) To assess the overall need for Medicines Information OPD in present scenario.

Materials and Methods: A pre-validated questionnaire based study was conducted amongst 500 patients of tertiary health care hospital. The questionnaire consisted of specific questions regarding understanding of prescription, knowledge about adverse drug reaction, view about self-medication and opinion regarding the need of Medicines Info OPD.

Results: Significantly large proportion of patients opined that doctors do not have sufficient time in current Indian healthcare to explain the prescription and they are not aware of adverse drug reactions, expiry date or use the package inserts etc.

Conclusion: Clinically relevant, up to date, user specific, independent, objective and unbiased Medicines Info OPD is essential for appropriate drug use and can help in a big way to common public to address many problems faced by them.

Key Words: Information; Prescription; Unbiased; Clinically Relevant

INTRODUCTION

India's population has increased to 1.21 billion people with the addition of 181 million people in the last decade according to 2011 census.[1] The allopathic doctor-population ratio at present stands at 1:1,722, according to the Medical Council of India.[2,3] Taking into consideration other streams of Indian medicine systems the doctor-population ratio comes to 128 doctors per lakh population, Indian literacy rate grew to 74.04% in 2011. Still India has the largest illiterate population than any other nation on the earth.[1] Population burden, illiteracy, availability of few doctors for larger group of population all these leads to many unanswered questions left in a patient's mind. Incomplete information results into noncompliance, therapeutic failure, and adverse drug reactions (ADR).

'According to the World Health Organization (WHO), at least 60% of ADRs are preventable, Amongst the various causes are wrong diagnosis of the patient's condition, prescription of the wrong drug or wrong dosage of the right drug, an undetected medical, genetic or allergic condition that might cause a patient reaction, self-medication not following the instructions for taking the medication and use of a sub-standard medication are important preventable factors..'[4]

Smallest mistake in Heath Care sector have catastrophic implications. It is very important to establish a system which will provide noncommercial, independent, unbiased source of medicine information.[5] Medicines Info OPD is a concept and step towards safe and appropriate use of medicines.[6-8]

Thus the present study was undertaken with following objectives:

1. To assess the present status of knowledge about the medicines in the patients coming to outpatient department of a tertiary care teaching hospital and its correlation with education.
2. To assess the medicine information dispensing modalities, their use and sufficiency from the patients view point in the said hospital.
3. To assess the overall need for Medicine Information OPD in present scenario in a tertiary care teaching hospital.

METHODS

Study Design: Cross Sectional Questionnaire Based Observational Study

Study Site: The study was carried out at Acharya Vinoba Bhave Rural Hospital (AVBRH), Sawangi, Wardha, a tertiary care teaching hospital of Jawaharlal Nehru Medical College.

Study Duration: Three Months (June-August 2011)

Sample Size: Total: 500

250-Educated (Primary and above)
250-Uneducated (No formal education)

Inclusion criteria:

1. Patients and Relatives above 18 years of age.
2. Patients and Relatives giving consent.
3. Patients and Relatives who understand Hindi, English or Marathi

Exclusion criteria:

1. Patients and Relatives below 18 years of age.
2. Patients and Relatives who didn't give consent.
3. Psychiatric patients.
4. Patients and Relatives who do not understand Hindi or English or Marathi

Ethical committee approval from Institutional Ethics Committee: Ref No. DMIMS (DU)/IEC/2011-12/418

Validation of Questionnaire was done by Delphi method. After taking the informed consent, individual was asked to fill the questionnaire comprising of 23 questions.

The questionnaire consisted of specific questions regarding understanding of prescription, Opinion about crowded OPDs, costly medicines, need of Medicines information OPD. Questions regarding knowledge of patients and relatives about package insert, adverse drug reactions, availability of same drugs with same combinations with different trade names and with different costs, knowledge about drug interactions.

The questionnaire also inquired about current practices such as self-medication, usage of different pathies at the same time, purchasing other brand of drugs instead of prescribed one, taking same drugs, buying incomplete dose of drugs. Subject's opinion whether doctors have sufficient time to inform patients about adverse drug reactions of the prescribed drugs. Whether they check expiry date or not, whether they inform their doctors about concurrent medication or not was analyzed.

Specific questions regarding how patients differentiate between different drugs, whether

Table-1: Response of People on the Given Questionnaire

Sr. No	Questions	Response of Population (%)			
		Answer	Educated (n= 250)	Uneducated (n= 250)	Overall (n= 500)
1	Do you understand the prescription?	Yes	96 (38.4%)	23 (9.2%)	119 (23.8%)
		No	154 (61.6%)	227 (90.8%)	381 (76.2%)
2.	Do you think that OPDs are very crowded and doctors do not have sufficient time to explain the prescription?	Yes	124(49.6%)	165 (66%)	281 (57.8%)
		No	126 (50.4%)	85 (34%)	21 (42.2%)
3.	Do you think that chemist have sufficient time to explain the prescription to you?	Yes	193 (77.2%)	26 (10.4%)	219 (43.8%)
		No	118 (47.2%)	163 (65.2%)	281 (56.2 %)
4.	Do you show the drugs to the doctor after purchasing it?*	Yes	137 (54.8%)	188 (75.2%)	325 (65%)
		No	113 (45.2%)	62 (24.8%)	175 (35%)
5.	How do you differentiate between different drugs?	Size	25 (10%)	29 (11.6%)	54 (10.8%)
		Color	115 (46%)	205 (82%)	320* (64%)
		Shape	7 (2.8%)	0 (0%)	7 (1.4%)
		Package	10 (4%)	10 (4%)	20 (4%)
		Name	93 (37.2%)	6 (2.4%)	99* (19.8%)
6.	How does doctor explain you about drug intake?	Name	192 (76.4%)	188 (75%)	380(76%)
		Size	6 (2.4%)	8 (3.2%)	14 (2.8%)
		Color	15 (6.8%)	20 (8%)	35(7%)
		Shape	37 (14.8%)	34 (14%)	71 (14.2%)
7.	Do you know about package insert?	Yes	44 (17.6%)	23 (9.2%)	67 (13.4%)
		No	206 (82.4%)	227 (90.8%)	433 (86.6%)
8.	If yes, have you read it any time?	Yes	31 (12.4%)	10 (4%)	41 (8.2%)
		No	219 (87.6%)	240 (96%)	459 (91.8%)
9.	Do you always buy the whole dose of the drug prescribed by the doctor?*	Yes	126 (50.4%)	19 (7.6%)	145 (29%)
		No	124 (49.6%)	23 (92.4%)	355 (71%)
10.	Are you aware that a drug can cause adverse drug reaction	Yes	55 (22%)	39 (15.6%)	94 (18.8%)
		No	195 (78%)	211 (84.4%)	406(81.2%)
11.	Are you informed about the main adverse effects of the drugs you are consuming?	Yes	44 (17.6%)	13(5.2%)	57(11.4%)
		No	206 (82.4%)	237*(94.8%)	443(88.6%)
12.	Do you purchase the drugs of same brand prescribed by the doctor?*	Yes	170 (68%)	250 (100%)	420(84%)
		No	80 (32%)	00 (0%)	80(16%)
13.	Are you aware that same drugs with same combinations are available at different trade names with different costs?	Yes	34 (13.6%)	00(0%)	34(6.8%)
		No	216 (86.4%)	250(100%)	466(93.2%)
14.	Do you tell the doctor about your concurrent medications?*	Yes	182 (72.8%)	52(20.8%)	234(46.8%)
		No	68 (27.2%)	198(79.2%)	266(53.2%)
15.	Do you have any idea about drug interactions?	Yes	15 (6%)	00 (0%)	15(3%)
		No	235 (94%)	250 (100%)	455(97%)
16.	Do you use over the counter drugs as self-medication?*	Yes	151 (60.4%)	250 (100%)	347(69.4%)
		No	99 (39.6%)	00 (00%)	153(30.6%)
17.	Do you use different pathies at the same time?*	Yes	223 (89.2%)	74 (29.6%)	297 (59.4%)
		No	27 (10.8%)	176 (70.4%)	203(40.6%)
18.	Do you check the expiry date of medicines?	Yes	239 (95.6%)	227 (90.8%)	466(93.2%)
		No	11 (4.4%)	23 (9.2%)	34(6.8%)
19.	Do you feel drugs are very costly now days?	Yes	196 (78.4%)	194 (77.6%)	390(78%)
		No	54 (21.6%)	56 (22.4%)	110(22%)
20.	Does it affect your prescription & compliance?	Yes	196 (78.4%)	194 (77.6%)	390(78%)
		No	54 (21.6%)	56 (22.4%)	110(22%)
21.	Do you take the same drugs, if same symptoms occur without consulting a doctor?	Yes	159 (63.6%)	139 (55.6%)	298(59.6%)
		No	91 (36.4%)	111 (44.4%)	202(40.4%)
22.	Do the doctor and pharmacist guide you regarding storage of the drug?	Yes	55 (22%)	36 (14.4%)	91(18.2%)
		No	195 (78%)	214 (85.6%)	409(81.8%)
23.	Do you feel the need of MEDICINES INFO OPD?	Yes	217 (86.8%)	233 (93.2%)	450(90%)
		No	33 (13.2%)	17 (6.8%)	50(10%)

Note: * P < 0.001 using Fisher exact test

they show the drugs to the doctor after purchasing it to understand the dosage correctly were asked to the study subjects.

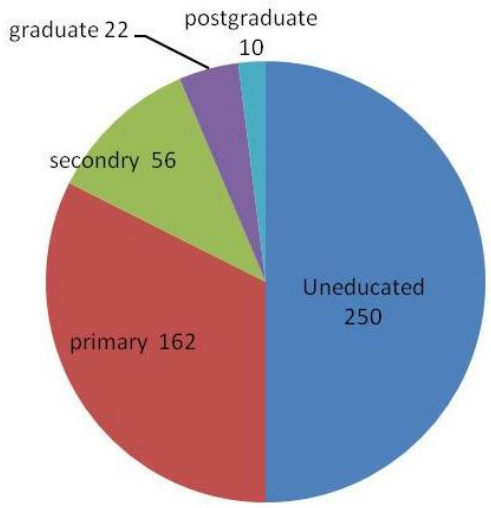
The data obtained was tabulated and expressed in percentage of educated and uneducated subject answering the questions in a specific way. Data was analyzed using Fishers exact test to determine the impact of education on the answers.

RESULTS

61.6% educated and 90.8% of the uneducated people didn't understand the prescription. Overall 57.8% individual had opinion that OPDs were very crowded and doctors did not have sufficient time to explain the prescription. Overall 56.2% individual thinks that pharmacist didn't have sufficient time to explain the prescription to them.

Overall 65% showed the drug to the doctors after purchasing it. Uneducated people (75.2%) significantly more inclined than educated people (54.8%) to show drugs to the doctor after purchasing it.

Figure-1: Educational Characteristics of the Population under Study



Uneducated people significantly more inclined to differentiate between different drugs by color (82%). While the educated people inclined to differentiate between different drugs by color (46%) and names (37%). But they have been shown statistically more inclined to differentiate between different drugs by names than the uneducated people.

76 % people opined that doctor explain the drug to them by name of the drugs.
86.6% individuals didn't know about package insert and 91.8% had not read it ever. Educated and uneducated people showed no difference regarding knowledge about package insert or reading it.

49.6% educated people and 92.4% uneducated people didn't always buy the whole dose of the drug prescribed by the doctor. Only 81.2% individuals were unaware that a drug can cause adverse drug reaction and 88.6% individual said they were not informed about the main adverse effects of the drugs you are consuming.

68% of educated; while all the 100% uneducated people said that they always purchase the drugs of same brand prescribed by the doctor and only 6.8% individuals were aware that same drugs with same combinations are available at different trade names with different costs.

Though 72.8% educated people tell the doctor about their concurrent medications. Only 20.8% uneducated people do the same. 97% didn't have any idea about drug interactions.

69.4% individual used over the counter drugs as self-medication. Uneducated people (100%) are more indulged in than educated people (60.4%). Educated people (89.2%) used different pathies together than uneducated (29.6%).

93.2% individual said that they check expiry date of medicines. 78% individuals feel that drugs are very costly now days and 78% individuals feel cost affect their prescription & compliance. 59.6% individual admitted that they take the same drugs, if same symptoms occur without consulting a doctor.

81.8% individual opined that doctor and pharmacist didn't guide them regarding storage of the drug. 90% individuals feel that there is need of medicines info OPD.

Statistical Analysis was performed using Fisher exact test. No significant difference was observed in 16 Questions (**Questions no. 1, 2, 3, 6, 7, 8, 10, 11, 13, 15, 18, 19, 20, 21, 22, 23**) in the educated and uneducated population with P>0.05. Whereas only in 7 questions. (**Questions no. 4, 5, 9, 12, 14, 16, 17**) significant difference in the responses was observed with p<0.001.

DISCUSSION

Understanding of prescription by the patient is as important as correct prescription by the prescriber. The success of treatment depends on the right drug, dose, route, frequency, duration that is called as rational use of drugs. Statistical analysis showed no significant difference in understanding of prescription in educated and uneducated population, indicating that education play no role on understanding of prescription correctly and completely.

In our country there is one doctor for 1,722 people, heavy work load leads to insufficient explanation of prescription to individual patient, many queries remain unanswered which lead ineffective and irrational use of drugs.[1] No significant difference observed in opinion of educated and uneducated population regarding crowded OPDs and unanswered queries both by doctors and chemist.

Showing drugs to the doctors may solve many problems such as regarding differentiation, doses, frequency in this regard significant difference was observed in educated and uneducated population. More of uneducated population showed drug to the doctor. Significant difference was observed in educated and uneducated population in differentiating between drugs, but no significant difference in observed in explaining drugs to educated and uneducated people; doctors explain the drug to both the population by name only.

Package insert is a major source of complete drug information. As for as knowledge about package insert and its use is concerned no significant difference observed in educated and uneducated patients Significant difference observed here, uneducated people buying incomplete dose of the drug. Educated people have good compliance.

It is patient Right to have complete information of drugs they are consuming effects as well as adverse effects. With regards to awareness about adverse drug reaction no significant difference was observed in educated and uneducated patients.

Significant difference observed in purchasing of drug with same brand name. When a doctor is writing a prescription, or a consumer is buying an over-the-counter medicine, they may have a choice between a branded medicine and the generic version of that medicine.
Most importantly, the public must realize there is practically no difference between a generic drug and a brand name drug the only difference is price. They are exactly the same in effectiveness, quality, purity, dosage requirements, side effects, risks, and safety of the generic alternatives.[9,10] No Significant difference observed in educated and uneducated people regarding knowledge of generic medicine, educated people are also not aware about the availability of generic medicine. Significant difference observed in use of over the counter drug, more of educated people tell doctor about their concurrent medication, but no significant difference observed in educated and uneducated population about idea of drug interaction. Significant difference observed in educated and uneducated people, more of the educated people use different pathies together. This shows the negative impact education has on the manner of drug utilization.

Causes of irrational use include lack of knowledge, skills or independent information, unrestricted availability of medicines, overwork of health personnel, inappropriate promotion of medicines and profit motives from selling medicines. Vigilant assessment of the risks and benefits of medicines promotes patient safety.

As in statistical analysis significant difference was obtained in educated and uneducated people for only seven questions. For 16

questions no significant difference was obtained in educated and uneducated people. It means there is lack of awareness not only in uneducated but also in educated people.

CONCLUSION

Hence Medicines information OPD is need of the hour for independent and unbiased drug information for optimization of drug use for both educated and uneducated patient.

The medicines information OPD will to a large extent take the work of explaining the prescription, way of consumption, ADRS, method of storage, so that clinician can spare more time to the patient in overcrowded OPD.

REFERENCES

1. Office of the registrar general & Census Commissioner, Ministry of home affairs, India. Census of India 2011. [cited 2011 July 16] Available from URL: http://www.Censusindia.gov.in
2. Kushwaha A. India ranks 67th among developing countries in doctor-population ratios. pharmatutor, pharmacy infopedia 2010 April [cited 2011 July 25] 3(1) Available from: URL: http://www.pharmatutor.org
3. Reddy AK, Yasa S, Challa S. Doctor population ratio stands at 1:1, 722. Financial express, epaper 2005 July [cited 2011 July 25] 12(3) Available from URL : http://www.financialexpress.com
4. Curry LC, Walker C, Hogstel MO, Burns P. Teaching older adults to self-manage medications: preventing adverse drug reactions. J Gerontol Nurs 2005;31(4):32-42.
5. Aronson JK. A prescription for better prescribing. Br J Clin Pharmacol 2006;61:487-91.
6. Gardner RM, Overhage JM, Steen EB, et al. Core content for the subspecialty of clinical informatics. JAMIA 2009; 16 (2):153-7.
7. Safran C, Shabot MM, Munger BS, et al. Program requirements for fellowship education in the subspecialty of clinical informatic. JAMIA 2009; 16 (2): 158-66.
8. Sarbadhikari SN. The state of medical informatics in India: a roadmap for optimal organization. J Med Syst. 2005 Apr; 29(2):125-41
9. Banahan BF, Kolassa EM. A physician survey on generic drugs and substitution of critical dose medications. Arch Intern Med 1997 Oct 13; 157(18):2080-8.
10. Steinman MA, Chren M, Landefeld CS. What's in a name? Use of brand versus generic drug names in United States outpatient practice. J Gen Intern Med 2007 May;22(5):645-648

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