

## A SURVEY ON KNOWLEDGE AND PERCEPTION OF PHARMACY STUDENTS TOWARDS ADVERSE DRUG REACTION (ADR) REPORTING.

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Received:5 May 2012, Revised and Accepted:9 June 2012

### ABSTRACT

**Aim:** To assess the knowledge and perception of Bachelor's of pharmacy students towards adverse drug reaction (ADR) reporting.

**Method:** 180 pharmacy students were selected randomly from 6 different colleges and a self-administered questionnaire was used to collect the data from these students.

**Result:** Only 44.11% students correctly answered the definition of ADR and 90% were not aware about the regulating body of ADR in India. Few students were having knowledge about pharmacovigilance. 34.8% respondents strongly agreed that Pharmacovigilance should be included as a core topic in pharmacy education and 52.96% Strongly disagreed that the topic of pharmacovigilance is well covered in the pharmacy college.

**Conclusion:** Imparting knowledge and creating awareness of ADR reporting among pharmacists can not only increase the number of ADR reports but can decrease the incidences of ADR also.

**Keywords:** Adverse drug reaction, Pharmacists, Survey, Questionnaire

### INTRODUCTION

Adverse drug reaction (ADR) which is defined as 'response to a drug which is noxious and unintended, and which occurs at doses normally used in man for the prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function'<sup>1</sup> is the major problem of global concern.

Pharmacovigilance is the science and activities relating to detection, assessment, understanding and prevention of adverse effects or any other drug related problems<sup>2</sup>. Pharmacovigilance should however not be limited to the reporting of classical adverse effects, it should also be concerned with identification of product defects, unexpected insufficient therapeutic effects, intoxications and misuse – abuse situations<sup>3</sup>. According to WHO guidelines (2000), functions of pharmacovigilance are the detection and study of ADR's, measurement of risk and effectiveness of drug use, dissemination of this information and education.

ADRs are common cause of morbidity and mortality in both hospital and community settings. ADRs are responsible for about 5%-20% of hospital admissions<sup>4, 5</sup>. It has major impact on public health by imposing a considerable economic burden on the society and the already stretched health care systems<sup>6,7</sup>. So the need of the hour is to overcome this problem. The aim of the current study is to check

the knowledge and awareness regarding adverse drug reaction and its reporting among final year pharmacy students.

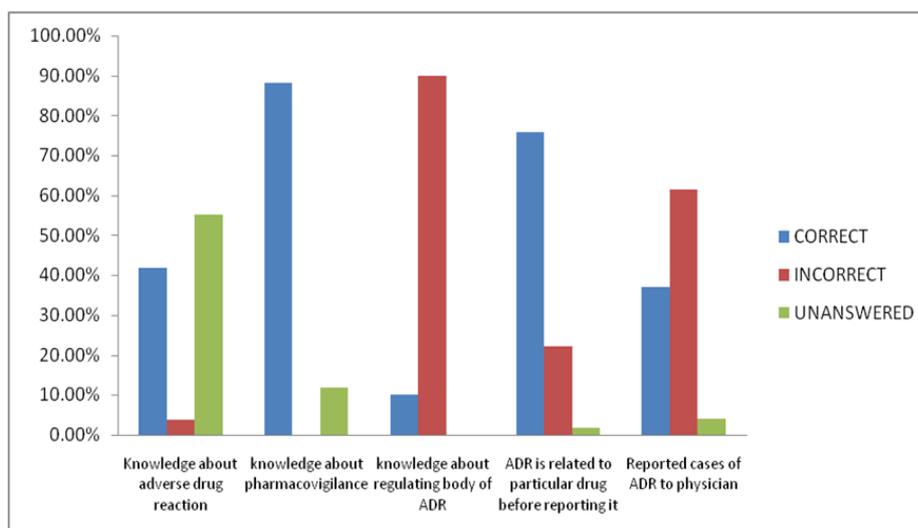
### METHOD

To achieve the objectives 5 colleges from Technical University, and campus of public university, were selected. From all the colleges 30 students on average were selected. College selection was on regional basis and student selection was random. B.Pharmacy 8<sup>th</sup> sem students were selected. All the students were informed regarding the purpose of the study.

Data was collected using self administered questionnaire. The questionnaire was adapted from similar study conducted previously<sup>8, 9</sup>. Various parameters regarding awareness and perception of ADRs were included in the questionnaire.

### RESULT AND DISCUSSION

The study showed that 3.71% students incorrectly answered and 55.6% were not able to define the ADR at all. Only 44.11% students defined it correctly. Regarding of Pharmacovigilance 88.14% had knowledge about it. 90% do not know about the regulating body of ADRs in India. 75.9% correctly answered that before reporting we should make sure that the ADR is related to specific drug, only 37.05% students have reported ADRs either of own or someone related to them.



| S.No | Statements   | SA (%) | A (%) | N (%) | D (%) | SD (%) |
|------|--|--------|-------|-------|-------|--------|
| 1    | Pharmacovigilance should be included as a core topic in pharmacy education.  | 34.8   | 38.5  | 16.66 | 3.33  | 6.66   |
| 2    | I believe that the topic of pharmacovigilance is well covered in my pharmacy college.  | 3.33   | 14.07 | 14.44 | 15.18 | 52.96  |
| 3    | I don't have any idea of how to report ADRs to the relevant authorities in India.  | 18.14  | 19.62 | 22.22 | 21.48 | 18.51  |
| 4    | Pharmacy students can perform ADR reporting.   | 27.40  | 35.55 | 10.37 | 15.18 | 11.48  |
| 5    | ADR reporting should be made compulsory for the pharmacists.   | 57.77  | 24.44 | 9.25  | 5.55  | 2.96   |
| 6    | Information on how to report ADRs should be taught to senior pharmacy students.  | 35.55  | 34.8  | 13.33 | 11.48 | 4.81   |
| 7    | Reporting of known ADR makes no significant contribution to the reporting system.  | 1.85   | 15.18 | 21.48 | 23.70 | 37.77  |
| 8    | With my present knowledge, I am very well preped to report any ADRs notice in my future practice.                            | 6.29   | 10.74 | 12.22 | 10.74 | 60.00  |
| 9    | I believe pharmacist is one of the most important healthcare professionals to report ADRs.                                   | 57.03  | 19.62 | 11.11 | 6.66  | 5.55   |
| 10   | I believe serious and unexpected reaction that is not fatal or life threatening during clinical trials must not be reported. | 9.25   | 9.25  | 10.37 | 17.40 | 53.70  |

The purpose of the present study was to evaluate the knowledge of pharmacovigilance and Adverse drug reaction reporting among final year pharmacy students of Punjab.

The study showed that 34.8% students strongly agreed while 38.5% agreed that pharmacovigilance should be included as a core topic in pharmacy education as 52.96% students strongly disagreed and 15.18% disagreed that the topic of pharmacovigilance is well covered in my pharmacy college. Moreover only 6.29% strongly agreed that there is lack of knowledge regarding pharmacovigilance and adverse drug reaction reporting and 60% disagreed with this statement. Again lack of awareness can be observed from fig.1.1. These statements conclude that there is lack of knowledge regarding adverse drug reaction reporting and pharmacovigilance. Lack of awareness in this regard has been supported by earlier studies also. In the previous study<sup>10</sup> 95.9% respondents suggested that continuous medical education is required for the proper adverse drug reaction reporting and 68.4% suggested that awareness should be increased about adverse drug reaction reporting by adverse drug reaction monitoring committee. In another study<sup>10, 11</sup> 32.3% and 36.4% respectively agreed that level of clinical knowledge makes it difficult to decide whether or not an adverse drug reaction has occurred. Thus, it is necessary for the adverse drug reaction reporting committee to increase the knowledge and create awareness regarding adverse drug reaction reporting among other health care professionals along with physicians<sup>8</sup>. Adverse drug reaction reporting can be encouraged by proper education<sup>12,13</sup>, spending more time with patients<sup>10</sup> creating more awareness<sup>8,14</sup>, Informing how to report adverse drug reactions to senior pharmacy students, making reporting system simple, acknowledging the receipt of the report and Participation of the pharmacists in ward rounds<sup>15</sup>. This will help pharmacists to identify ADRs to be reported and will not increase in reporting of reactions but will also decrease the number of avoidable adverse drug events<sup>16</sup>. Students did not performed well when they were asked if they have any idea of how to report ADRs to the relevant authorities in India as only 10% students correctly replied. Previous studies<sup>8</sup> also have the same results. 27.40% students strongly agreed that Pharmacy students can perform ADR reporting and 57.77% strongly agreed that ADR reporting should be made compulsory for the pharmacists. Pharmacist being the one of the most important member of health care professionals can help in reporting adverse drug reactions. Studies<sup>10</sup> showed that 63.30% suggested the involvement of other health care professionals will improve ADR. The number of ADR-reporting has been increased by the participation of Pharmacy students<sup>16</sup>. The subject of Pharmacovigilance should be encouraged in the institutes and ADR reporting should be made compulsory for the pharmacist. Only 1.85% strongly agreed that reporting of known ADR makes no significant contribution to the reporting system but 61.47% disagreed with the statement. Pharmacist does contribute to the reporting system as mentioned in the previous studies also<sup>7</sup>. In the present study also 57.03% strongly agreed and 19.62% agreed that pharmacist is one of the most important healthcare professionals to report ADRs. 70% students disagreed that serious and unexpected reaction that are not fatal or life threatening during clinical trials must not be reported, it shows that as proper education, training and guidance is not given to the pharmacist, pharmacist is not able to recognize the type and cases of ADR that should be reported and these statements are supported by<sup>11</sup>.

## CONCLUSION

Our study strongly suggests that there is greater need of increasing knowledge and creating awareness among pharmacy students so that

they can be able to identify the type of ADR to be reported. Participation of pharmacists in reporting ADRs will increase the number of reports and will decrease the incidences of ADRs. Considering Pharmacists as an important member of health care team and imparting proper education will help the community to overcome the incidences of ADR.

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