Evaluation of Knowledge, Attitude and Practice of Pharmacovigilance among Retail Pharmacist in Thiruvallur District, Tamilnadu, India

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Abstract

Objective: The study was aimed to assess knowledge, attitude and practices of retail pharmacists towards Pharmacovigilance (PV) and ADR reporting in Thiruvallur district, Tamilnadu towards adverse drug reactions (ADR).

Methods: In this study we had selected community pharmacists as the study population. Registered Pharmacists working at retail Pharmacies were asked to complete a paper-based questionnaire which included 10 questions related to knowledge and 8 questions related to attitude and practice towards adverse drug reaction (ADR).

Results: The total of 69 participants provided their response. The demographic details are tabulated in table.1. The knowledge of the participants regarding the Pharmacovigilance was assessed by asking 10 questions. A score of 1 was given for correct answer and 0 score for wrong answer. The highest score obtained was 9 and the lowest score was 0.The percentage of knowledge of the participants (Retail Pharmacists) about the Pharmacovigilance was only 26%.

Conclusion: The result showed the retail Pharmacist had a poor knowledge and practice towards PV at the same time they showed a good attitude towards adverse drug reactions. Our study also suggests that more awareness is needed to improve reporting.

Keywords: Adverse drug reactions, Pharmacovigilance, Retail Pharmacist, questionnaire, awareness

INTRODUCTION

Safe use of medications is an important issue in today's world. The administration of drug is associated with many undesirable or unintended responses which are referred as Adverse Drug Reaction (ADRs) [1]. All ADR's can't be documented by the manufacturer in early safety studies. So it is important to monitor the safety issue even after marketing [2].

WHO defines ADR as "any type of response caused by a drug, that is unintentional, noxious and takes place at the drug doses which are used for diagnosing, prophylaxis, or treatment of a disease or due to the medications for the physiological functions"[3]. Christopher, et al. confirmed that pharmacists have a sound awareness and are helpful in using the Yellow Card spontaneous ADR system for reporting. However, training and education are important in retaining and growth of ADR reporting by pharmacists [4]. Spontaneous reporting has contributed drastically in superior levels of Pharmacovigilance in many countries [5]. Retail pharmacist are usually first to be contacted by patients in most ADR and they are very important source of ADR reporting [6]. Adverse drug reactions (ADR) are one of the leading causes of mortality and morbidity in India. Retail pharmacists being in

direct contact with patients have more possibilities of reporting an ADR. So their knowledge about Pharmacovigilance will be more useful towards the safe use of medication.

MATERIALS AND METHODS

Analytical study was conducted in pharmacies around Thiruvallur District, Tamilnadu, India, among the retail pharmacist, during September 2019 – December 2019. A questionnaire was prepared to investigate knowledge, attitude and practices of pharmacists about ADR reporting. The questionnaire includes questions from previous studies that examined the knowledge and attitude of healthcare professionals, about ADR reporting. This study includes both males and females of Registered Pharmacist. The survey questionnaire was prepared according to the need of the present study. A total of 18 questions were framed and classified into two groups which includes 10 questions related to knowledge and 8 questions related to attitude and practice towards adverse drug reaction (ADR). The questionnaire was validated by three lecturers of clinical pharmacy. This questionnaire was tested and made error-free prior to using [7].

RESULTS

The total of 69 participants provided their response. The demographic details are tabulated in table.1. The knowledge of the participants regarding the Pharmacovigilance was assessed by asking 10 questions. A score of 1 was given for correct answer and 0 score for wrong answer. The highest score obtained was 9 and the lowest score was 0. The percentage of knowledge of the participants (Retail Pharmacists) about the Pharmacovigilance was only 26% (Table 2).

Eight questions were framed to investigate participant's attitude and practice (Table 3). The attitude towards Pharmacovigilance and ADRs was good but the practice was not satisfactory. Nearly 94.2% (n=65) of participants thinks that reporting of adverse drug reaction is necessary and 89.9% (62) of them needs Pharmacovigilance should be taught in detail to healthcare professionals.

Table 1: Gender of the Respondent

Gender	No. of Participants	Percentage (%)	Cumulative Percentage (%)
Males	51	73.91	73.91
Females	18	26.09	100
Total	**69**	**100**	

Table 2: Knowledge of the participants regarding the Pharmacovigilance

S.No.	Question	Answer	Number	Gender	
				Male	Female
1	Define Pharmacovigilance?	Correct	25	20	05
		Incorrect	44	31	13
2	The important purpose of Pharmacovigilance is	Correct	19	15	04
		Incorrect	50	36	14
3	Which of the following methods is commonly employed by the pharmaceutical companies to monitor adverse drug reactions of new drugs once they are launched in the market?	Correct	29	18	11
		Incorrect	40	33	07
4	A serious adverse Event in India should be	Correct	20	12	08

	reported to the Regulatory body within	Incorrect	49	39	10
5	The international center for adverse drug reaction monitoring is located in	Correct	26	19	07
		Incorrect	43	32	11
6	In India which Regulatory body is responsible for monitoring of ADR's?	Correct	31	21	10
		Incorrect	38	30	08
7	Which one of the following is the 'WHO online database' for reporting ADRs?	Correct	22	17	05
		Incorrect	47	34	13
8	Rare ADRs can be identified in the following phase of a clinical trial	Correct	35	27	08
		Incorrect	34	24	10
9	The healthcare professionals responsible for reporting ADR in a hospital is/are	Correct	21	16	05
		Incorrect	48	35	13
10	What is the consequence of serious ADR?	Correct	32	23	09
		Incorrect	37	28	09

Table 3: Retail Pharmacist attitude and practice about pharmacovigilance and ADR's

S.No	Questions	Yes (%)	No (%)
1	Do you think reporting of adverse drug reaction is necessary?	65(94.2)	04(5.8)
2	Do you think Pharmacovigilance should be taught in detail to healthcare professionals?	62(89.9)	07(10.1)
3	Have you anytime read any article on prevention of adverse drug reactions?	39(56.5)	30(43.5)
4	Have you ever come across with an ADR?	35(50.7)	34(49.3)
5	Are you aware about the existence of Pharmacovigilance programme of India (PVPI)?	30(43.5)	39(56.5)
6	Are you aware about the existence of Toll free number of Pharmacovigilance programme of India (PVPI)?	24(34.8)	45(65.2)
7	Are you aware about the existence of adverse events monitoring centre in your area?	15(21.7)	54(78.3)
8	Have you ever been trained on how to report ADR?	05(7.2)	64(92.8)

DISCUSSION

Pharmacovigilance deals with detection, assessment, understanding and prevention of adverse effects or any other drug related problems. The ultimate aim of pharmacovigilance is to ensure patient safety and rational use of medicines once a new medicine is released for general use in the society. The most notable outcome of Pharmacovigilance is the prevention of patients being affected unnecessarily due to the negative consequences of pharmacotherapy [8]. Pharmacovigilance programs have played a crucial role in detection of ADRs and banning of several drugs from the market. However, under-reporting of ADRs is one of the main problems associated with Pharmacovigilance programs [9]. It is known that spontaneous reporting programs (one of the most widely used methods of Pharmacovigilance) are associated with relatively low levels of reporting.

This is the study assessing the Knowledge, attitude, practice of pharmacovigilance among the Retail Pharmacist working as pharmacist in retail shops. The percentage of knowledge of the participants (Retail Pharmacists) about the Pharmacovigilance was only26%. Nearly 94.2% (n=65) of participants thinks that reporting of adverse drug reaction is necessary and 89.9% (62) of them needs Pharmacovigilance should be taught in detail to healthcare professionals.

LIMITATIONS

The drawback of the research is that the number of participants who were involved in this study was comparatively small.

CONCLUSION

To conclude, the retail pharmacist had a poor knowledge and practice towards PV at the same time they showed a good attitude towards adverse drug reactions. Our findings suggested that there is a need to create more awareness about Pharmacovigilance among, the retail pharmacist thereby increasing the reporting culture and the safe use of drugs.

CONFLICT OF INTERESTS

We declare that we have no conflict of interest.

REFERENCE

1. WHO. The safety of medicines in public health programmes: pharmacovigilance, an essential tool. 2006.
2. Kharkar M, Bowalekar S. Knowledge attitude and perception/practices (KAP) Of medical practitioners in India towards adverse drug reaction (ADR) reporting. Perspect Clin Res, 2012; 3(3): 90-94.
3. Palaian S, Ibrahim MI, Mishra P: Health professionals' knowledge, attitude and practices towards pharmacovigilance in Nepal. Pharmacy practice 9(4), 2011, 228-35.
4. Green CF, Mottram DR, Rowe PH, Pirmohamed M. Attitudes and knowledge of hospital pharmacists to adverse drug reaction reporting. British journal of clinical pharmacology. 51(1), 2001, 81-6.
5. Waller PC. Making the most of spontaneous adverse drug reaction reporting. Basic Clin Pharmacol Toxicol., 2006; 98: 320-323.
6. Elkalmi RM, Hassali MA, Ibrahim MIM,Widodo RT, Efan QM, Hadi MA.Pharmacy students' knowledge and perceptions about Pharmacovigilance in Malaysian public universities. Am J Pharm Educ, 2011; 75(5).
7. Hinton, P. R. & Brownlow, C. 2004. SPSS explained. Routledge, NY. Oppenheim, A. N. Questionnaire design, interviewing and attitude measurement, London, Pinter Publisher, Ltd.1992, 58-59.
8. Olsson S. The need for pharmacovigilance. In: Gupta SK, editor. Pharmacology and Therapeutics in the New Millennium. New Delhi: Narosa Publishing House; 2001. pp. 502–8.
9. Irujo M, Beitia G, Bes-Rastrollo M, Figueiras A, Hernández-Díaz S, Lasheras B. Factors that influence under-reporting of suspected adverse drug reactions among community pharmacists in a Spanish region. Drug Saf. 2007;30:1073–82.