



## Knowledge, Attitude and Perception of Community Pharmacists about the Professional Standards and Responsibilities Entrusted by Pharmacy Practice Regulation, 2015- A Cross Sectional Survey in the State of Tamil Nadu

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### Abstract

In this study a cross sectional survey was conducted in the State of Tamil Nadu to assess the Knowledge, Attitude and Perception of Community Pharmacists on the Professional standards and Responsibilities Entrusted by Pharmacy Practice Regulation-2015. The at most aim in framing and developing of pharmacy practice regulations- 2015 was to develop the dignity and practicing of pharmacy practice profession in India. It included pharmaceutical care services like, prescription audit, patient counseling, providing drug information, ADR monitoring etc., It is a proud moment and a challenge in getting these empowerments legally, but at the same time it becomes important that to what extend pharmacist of our country are excelling in knowledge and standards with skills. The introduction of Pharm. D degree in addition bought on a change in the field in sectors of patient counseling and adverse drug monitoring by pharmacist, which was the main goal behind introducing of course into the field. It enables to be a good clinical pharmacist with patient caring monitored adequately. The Overall observations through this survey revealed that only a part of community pharmacists is having awareness about the new "Pharmacy Practice Regulations-2015" and the contents of the same. Very few of the community pharmacists interviewed were having the knowledge about the pharmaceutical care services recommended in the new regulations. Though many pharmacists claimed to provide pharmaceutical care services, the integrity of their answers were questionable as their answers to other related questions were contraindicated. However, many pharmacists showed personal interest to provide pharmaceutical care services in future upcoming times.

**Keywords:** Community Pharmacist; Educational Programs; Practice Standards; Patient Counseling; Prescriptions

### Introduction

With the increasing complications in health sector all over the world, the present era requires pharmacist in addition to enhance the health of public along with physicians and nurses on educating patients on their ailments. Patient safety is the main area of concern with laws and modalities benefitting patients. Developing countries are having their laws modified which are patient health centric and safe to them [1,2]. In India this development is yet to prosper where pharmacist is still found more in industrial sectors and not involved much in-patient care. They are still tied up at the retail drug stores dispensing drugs insisted by the physicians [3, 4]. The role of pharmacist in dispensing at hospitals with proper and required information regarding drugs being given to patients is important for patient health and welfare. Duty of a pharmacist in timely intervention revilement for the benefit of the patients is

found to be important [5,6]. A change in pharmacist profession could be bought about with the affiliation and active functioning of pharmacist with associations of allopathic professions by a registered pharmacist [7,8]. Continued participation of a pharmacist in professional meetings carried out by the academic bodies or any other organizations helps in development of profession.

The pharmacy practice regulation 2015 was framed in order to standardize and improve the practicing methods of pharmacy in India. Some of the main criteria included were, dispensing of drugs by only qualified registered pharmacist, wearing of white apron by pharmacist on dispensing, providing of counseling to patients on drugs other than dispensing in community pharmacy, registration certificates to be clearly placed in visible region in pharmacies etc.

Pharmacy educational programs in India include the D. Pharm, Diploma in Pharmacy; B. Pharm, Bachelor of Pharmacy; Pharm. D, Doctor of Pharmacy. From the level of dispensing of drugs in a community pharmacy, the pharmacist has grown to a clinical pharmacist who is engaged in bed side ward round participation along with the doctors in developed countries, intervene the possible drug interactions, adverse drug monitoring, more detailed patient counseling etc., All these practices require a pharmacist who is strong in Pharmacy Practice sectors with a degree of Pharm. D (Doctor of Pharmacy), M. Pharm; Pharmacy practice. Dispensing of drugs in a community pharmacy could be carried out by the D. Pharm (Diploma in Pharmacy) pharmacists.

The essential reasons which led to the framing of regulations by the Pharmacy council of India were to enhance the quality of health care, to maintain standards in pharmacist profession, to decrease healthcare costs and to avoid unwanted abuse of drugs [9,10]. The rules within the regulations were mainly concerned with functioning and duties of pharmacist with patients, general public and another registered pharmacist. The practicing of profession should be based on true scientific work without bias's and should not support anyone who violates this.

Thus, the pharmacy practice regulation bought on by the government is mainly aimed at developing the status of pharmacist and pharmacy profession in India. This action taken by the government is the first one oriented upon patient centric by the pharmacist [11]. The Pharmacy Practice in India is following the regulations of "Pharmacy Act" and "Drugs and Cosmetics Act" introduced by the central government long back ago. These set of rules imbibes a uniform code of pharmacy ethics, patient health concerning responsibilities, job options of a pharmacist, community pharmacist activity, drug information pharmacist in our country, etc [12].

### Study process

**Study Design:** A Prospective cross-sectional survey was carried out for 10 months duration (April 2017-February 2018) with a number of 95 community pharmacist in the cities of Chennai like Adayar, Annasalai, Annanagar which are the highly populated cities in Chennai.

**Inclusion Criteria:** Registered pharmacists practicing in the community pharmacy settings in the state of Tamil Nadu were included in the study.

**Exclusion Criteria:** Pharmacists who had given inadequate information (less than 75%) required for data analysis.

**Pharmacist Recruitment:** The pharmacist as per inclusion criteria were approached and briefed about the purpose of the study and requested to participate in the study. Those who have given their oral consent participated in the study were given the study questionnaire. The filled in questionnaires were collected back as per the convenient timings of the participants.

**Sampling procedure:** Purposive sampling procedure was adopted.

### Data Analysis

The collected data were analyzed using descriptive statistical methods. The data were presented with mean, standard deviations, percentage values, etc. from excel sheets.

### Result and Discussion

A total of 95 community pharmacists were involved in the study. Details collected from the questionnaires as per the pharmacy practice guidelines 2015 were tabulated as follows.

S.NO	Type of Information	%
1.	Over utilization or under utilization	26
2.	Therapeutic duplication	23
3.	Drug-disease interactions	49
4.	Drug-drug interactions	72
5.	Incorrect drug dosage or duration of drug treatment	23
6.	Drug-allergy interactions	57
7.	Correlation of availability of drugs (to avoid artificial shortage of drugs)	5
8.	Clinical abuse/misuse	20
9.	N/A*	36

**Table 1:** Therapeutic Information Checked in the prescription by the Pharmacist Participated in the study.

N/A\* Not Applicable to the above.

72% of the community pharmacist claimed that they were checking the prescription for drug interactions like drug-drug interactions followed by drug-allergies and drug-disease interactions, correct dosage given, allergy to drugs, and others like past medical history and medications used. The data obtained is tabulated as follows. The expertise of these community pharmacists for providing such interventions on the drugs prescribed should be questioned. There is adequate room to believe that there may be a bias in these answers.

Parameters	Results obtained by statistical methods				
Age	21-30 (25%)	31-40 (22%)	41-50 (37%)	51-60 (9%)	61-70 (2%)
Duration of maintain patients data	<1 year (24%)	1-3 years (19%)	3-5 years (7%)	>5 years (16%)	N/A (29%)
Pharmacist interested in patient counseling	All (21%)	Some (15%)	Interested (11%)	Necessary (31%)	N/A (17%)
Qualification	D. Pharm (55%)	B. Pharm (26%)	Pharm. D (1%)	Others (18%)	
Pharmacist in community pharmacy	One (53%)	Two (26%)	Three (7%)	Four (9%)	
Professional experiences of pharmacist	<2 years (6%)	2-5years (21%)	5-10 years (27%)	>10 years (45%)	
Mode of maintaining patient profile	Electronic devices (11%)	Billing (46%)	Others (9%)		N/A (29%)
No: of continuing pharmacy education programs attended by pharmacist	One (17%)	Two (34%)	More than two (15%)		N/A (29%)
No: of pharmaceutical care services provided per day by pharmacist	<5 (36%)	5-10 (20%)	>10 (12%)		N/A (27%)
Discount provided by pharmacist	<10 (30%)	10-20 (19%)	>20 (7%)		N/A (39%)
Pharmacies collecting professional fee by pharmacist	Yes (27%)	No (67%)		N/A (1%)	
Opinion on professional fee collected by the pharmacist	Rs. 5/patient (12%)	Rs. 10/patient (16%)		N/A (7%)	
Pharmacy education program attended by the pharmacist	Yes (60%)	No (33%)		N/A (2%)	
Registration renewal information known by pharmacist	Yes (81%)	No (11%)		N/A (3%)	
Prescription checked by pharmacist in community pharmacies	Yes (90%)	No (4%)		N/A (1%)	
Pharmacist willing to be professional in community pharmacies	Yes (70%)	No (20%)		N/A (5%)	
Pharmacist information displayed in community pharmacies	Yes (55%)	No (35%)		N/A (5%)	
Pharmacies with pharmacist sigh board	Yes (53%)	No (33%)		N/A (44%)	
Pharmacist using white apron	Yes (17%)	No (77%)		N/A (1%)	
Pharmacist involved in patient counseling	Yes (73%)	No (21%)		N/A (1%)	
Pharmacist interested to counsel patient in future	Yes (49%)	No (29%)		N/A (22%)	
Pharmacist having confident in providing drug information	Yes (45%)	No (16%)		N/A (31%)	
Pharmacist showing interest to provide drug information	Yes (50%)	No (19%)		N/A (31%)	
No: of pharmacist providing drug information	Yes (47%)	No (19%)		N/A (29%)	
Pharmacist maintaining patient profile	Yes (64%)	No (30%)		N/A (1%)	
Gender distribution	Female (32%)		Male (68%)		
Proper storage conditions of drugs in community pharmacy	Yes (95%)		No (5%)		
Therapeutic dose checked by pharmacist	Yes (59%)		No (36%)		
No: of pharmacy providing discount	Yes (52%)		No (43%)		

S.NO	Type of Information	%
1.	Prescribers office information- (name, qualification, address and registration number)	55
2.	Patient information- (name, address, age, sex, weight)	60
3.	Date	67
4.	Rx symbol or superscription	54
5.	Medication prescribed or inscription	37
6.	Dispensing directions to pharmacist or subscription	31
7.	Direction for patient {to be placed on label	37
8.	Refill, special labeling and / or other instruction	23
9.	Prescribes signature and license or Drug Enforcement Agency (DEA) number as required	34
10.	Rational or irrational drugs	37
11.	N/A*	1

**Table 2:** Information checked in the prescription by the pharmacist participated in the study.

N/A\* Not Applicable to the above.

Nearly 46% of the respondents claimed that they were giving counseling about proper storage conditions of the drugs that they were dispensing. Prescription refilling information, special administration directions, actions to be taken in the event missed dose were the other counseling points given by study respondents and the data is shown as follows. Misuse of the drugs was avoided to the maximal level by checking of the above following criteria in case of any prescriptions bought without renewal. Other measures which were checked included the dose especially in case of geriatric and pediatric, their appropriate dosage forms etc.

S.NO	Type of information	%
1.	Name and description of the drug	67
2.	The dosage form, dose, route of administration and duration of drug therapy	72
3.	Intended use of the drug and expected active	16
4.	Special directions and precautions for the drug	28
5.	Common severe side effects or adverse effects or interactions and therapeutic contraindications that may be ncountered, including their avoidance and action required if they occur.	16
6.	Techniques for self-monitoring drug therapy	9
7.	Proper storage of the drugs	46
8.	Prescription refill information	37
9.	Action to be taken in event of missed dose	21
10.	To ensure rational use of drugs	6
11.	N/A*	20

**Table 3:** Types of Information Provided during Patient Counseling by the Pharmacist Participated in the study.

N/A\* Not Applicable to the above.

Patient counseling provided were on knowledge on the intake of drugs, disease conditions, life style modifications which could be opted, detailed knowledge on steps to be taken in emergency and missed doses etc.

Pharmaceutical care services provided by pharmacist included having a mutual relationship with the patients; collecting, recording, maintaining of all relevant data for the framing of therapy chart of the patient; Reviewing, monitoring, modifying of the therapy of the patient could be carried on by the pharmacist in concern with the patient and other healthcare team; Follow up of the drug therapy plan is exemplified in detail by the pharmacist and he ensures it. Patient counseling provided by the pharmacist must be interactive and not directive. Sometimes a professional fee of 10/- to 20/- rupees is collected for the information provided [13,14,15].

Overall observations through this survey revealed that only a part of the community pharmacists is aware about the new “Pharmacy Practice Regulations-2015” and the contents of the same. Very few of the community pharmacist interviewed were having the knowledge about the pharmaceutical care services recommended in the new regulations. Though many pharmacists claimed to provide pharmaceutical care services, the integrity of their answers were questionable as their answers to other related questions were contraindicated. However, many pharmacists showed personal interest to provide pharmaceutical care services but also felt lots of limitations including lack of knowledge, training time, etc., similar aspects were reported in the literature as well.

### Conclusion

Till the present era in our country pharmacist are being considered as the one who dispenses drugs as per instructions as like in a normal store. Educated people consider pharmacist one step ahead as the one who has license in dispensing of drugs other than the normal people. This situation could be changed only with steps taken forward. Continuing Pharmacy Education should be conducted to the community pharmacists to train them in pharmaceutical care services as prescribed by the Pharmacy Practice Regulations-2015 to meet the standards as expected by Pharmacy Council of India. The need of pharmacy assistants could be encouraged only when the person has a minimal Diploma course in Pharmacy or with a working experience under registered pharmacist. They would be of use in common dispensing of drugs in stores. As per the regulations they should not be given the licensure of maintaining the entire pharmacy without proper supervision.

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