

Title: Analytical Study of Pharmacist's role in prescription generated medicine sales.

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Abstract:

Pharmacist as a profession is having worldwide recognition and is an integral part of the healthcare system. Pharmacists play a major role in providing healthcare services by means of community pharmacy services in rural areas where physicians are not available or where physician services are too costly for meeting the healthcare necessities. This paper is written to identify the roles and responsibilities carried out by a pharmacist to guide the patient about medicine information, its intake and other necessary guidance to be followed by patient while consuming drugs. The findings of this paper can help to remove misunderstanding about pharmacist role and will reveal his importance in healthcare system.

The study has been carried out by using semi structured questionnaire. Response was collected from pharmacists, patients who are supposed to take medicines due to the nature of their disease and doctors.

Keywords: Pharmacist, Medical Representative, Prescription, Pharmaceutical Sales

Introduction:

Pharmacists comprise the third largest healthcare professionals in the world and pharmacy profession has been evolving steadily over the last decade in India (1). Today, pharmacists have expanded their role from dispensing to pharmaceutical care by maximizing the benefits of medications and their safety (2). Today's healthcare market is serving its patients/customers with medicines having standardized doses, prepacked forms and user-friendly instructions. It is observed that pharmacist was not much seen as an important element and given due importance in the process starting from prescription given by doctors to the needed patient till the sale of that medicines at pharmacy counter. A k ram et al. conducted a pilot study about job satisfaction among pharmacists in their practice settings. The study constituted a nationally representative sample and showed poor job satisfaction among Indian

pharmacists. Pharmacists stated that they didn't like their jobs better than the "average worker."
(3)

A study conducted in the community pharmacy setup in urban area of North India (New Delhi) showed that 71% patients got benefit from community pharmacists, but pharmacists predominantly have a commercial role, aimed at making profits (4). In India factors like illiteracy among patients, reluctance about medicine consumption, self-medication and low levels of adherence are some factors which acts as a challenge in pharmacist's job. Pharmacist

plays the role of strong mediator between doctors and patients who counsels and advise the patient to maximize the desired efficacy of the medicines and minimize the adverse effects of the medicines.

A pharmacist either as a owner of a pharmacy or as a salaried employee takes care of around 3,000 different types of medicines in the form of tablets, capsules, scrub, lotion, ointment, cream, syrup, saline, medical equipment etc. The public regards community pharmacists working in medical stores as a first choice to seek medical counsel for minor ailments but unfortunately pharmacists are always not available due to higher workload, increased volume of prescriptions and the number of interactions with patients (5). Developed nations have clearly established the role of community pharmacists by providing them with knowledge and techniques to counsel patients, provide information about medicines and disease conditions or advice about lifestyle modifications, drug administration, dosage, side effects, storage of drugs, and drug drug and drug-food interactions (6). Many developed nations such as Australia, United Kingdom, and United States have also given prescription rights to pharmacists and nurses to reduce burden on physicians and improve quality of care (7). The overall goal for this study to conduct a segment analysis of the pharmacist workforce based upon time spent in medication providing and in patient care services (8).

Research Objectives:

1. To identify the role of Pharmacist as a mediator in prescribed medicine sales
2. To study the different roles and responsibilities performed by pharmacist while selling the prescription generated medicines.

Research Methodology:

Descriptive survey research design method is adopted for the study. Patients suffering from lifestyle disorders like diabetes, blood pressure, hypertension, asthma, osteoporosis, psychotic disorders were surveyed as they must purchase refill prescriptions after specific time gap and need to consult with pharmacists and pharmacists. Selection of these respondents was done as they play the major role in prescription generated medicine sales. Survey was conducted in Pune city's major areas and pharmacies located in crowded areas where maximum walk-in customers are coming for purchase of different types of medicines. Stratified Random Sampling was chosen for the study. A total of 120 respondents were selected randomly from subgroups for study purposes. Structured questionnaire was circulated among selected respondents contacted through personal visits or email or google forms. 107 responses received, out of them unfilled or partially submitted or inappropriate questionnaire were removed, 100 responses were appropriate for data analysis.

Data Analysis and Interpretation:

Mean summary for independent variables:

Independent Variable	Mean
Pharmacist role as a mediator	6.27
Pharmacist role as an instructor to guide the dosage of medicine	5.30
Pharmacist guiding about the side effects of medicine	5.37
Pharmacist role to keep basic record and administrative tasks	6.25

The Mean summary statistics of the 7-point Likert scale questionnaire confirms the acceptance of pharmacist role as a mediator in this study. Other than mediator pharmacist as a instructor for guiding the right quantity of dosage, side effects of the medicine and administering the entire pharmacy by knowing the quantity of stock available and having knowledge of medicines selling in the highest quantity.

Results of research hypotheses tested at significance level @5%.

Results of structural model-research hypotheses significant at $p^{**} < 0.01$, $p^* < 0.05$

Pharmacist's role	Coefficient	t-Value	P-Value	Direction	Decision
Pharmacist role as a mediator	0.36	4.43	0.00	Positive	Supported
Pharmacist role as an instructor to guide the dosage of medicine	0.34	4.33	0.00	Positive	Supported
Pharmacist guiding about the side effects of medicine	0.71	4.20	0.00	Positive	Supported
Pharmacist role to keep basic record and administrative tasks	0.61	7.20	0.00	Positive	Supported

The multiple linear regression model for pharmacist role is a dependent variable using the step wise regression procedure with four independent variables resulting in a model fit measure R-Square of value 70% and all independent variables are jointly and individually affecting the study variable.

ANOVA Table

Variable	R Square	Adjusted R Square	ANOVA
			F (P value)
Pharmacist role as a mediator	0.62	0.61	64.93
Pharmacist role as an instructor to guide the dosage of medicine	0.03	0.28	29.23
Pharmacist guiding about the side effects of medicine	0.02	0.01	16.04
Pharmacist role to keep basic record and administrative tasks	0.73	0.71	46.42
Overall	0.70	0.69	35.31

Data from the responses suggests 75% of patients confirm that a pharmacist plays a very vital role as a mediator between patient and doctor. 93% of patients believe that with good scientific knowledge and work experience a pharmacist guide very accurately in the medicine dosage. 80% of patients supported that a pharmacist guides well about side effects of medicine. 70% of patients suggest that apart from knowledge and skills being pharmacist administrative work also plays vital role in doctor's generated prescription sales.

Pharmacist as a mediator between patient and doctor, as an instructor to guide the correct dose, to explain the side effects of medicines and to maintain the proper stock of medicines from different companies in adequate quantity plays very important role therefore, all the hypotheses are accepted and supported the positive influence of the independent variables on the pharmacist's role in doctor's generated prescription sales.

Findings:

1. Pharmacist is getting importance in all aspects of healthcare system because of his role as a mediator, patient care, dosage guidance, information of the side effects and administrative work
2. Those pharmacies who are hiring non pharmacy background employees are feeling importance of the pharmacist and knowing the risk associated with the job
3. Patients get more friendly with the pharmacist than that of a doctor in many cases as he communicates with them in a friendly manner
4. All pharmaceutical marketers depend a lot on pharmacists only for availability of their brands and detailed information about the prescription habits of doctors.
5. Entire sales of medicines in a pharmacy without any expiry of medicine depends on pharmacist as he is keeping knowledge of all the stock available

Limitations of the study:

This research is conducted with only four variables to understand the impact of pharmacist role on prescription generated medicine sales. While moving ahead in the same research more criterions could be added like educational level of pharmacist, sale of over-the-counter medicines by pharmacist, statutory bodies like pharmacy control of India and pharmacist association and their impact on job profile of pharmacist. The study is conducted only on a few patients suffering from lifestyle diseases and not inclusive of all categories of patients. The time and money factor involved in the study has resulted in doing for specified area of a city only.

Conclusion:

Pharmacy and medical (drug related) authorities should also at the state and local level, undertake initiatives to enhance the role of pharmacists in both communities' settings and hospitals to improve the therapeutic outcomes for patients, generate and improve pharmacist job satisfaction, and improve health and medication related awareness among peoples. Government should take stringent measures where non pharmacy background employees are working and playing with the health of innocent peoples. Based on job profile of a pharmacist and his importance in healthcare system his remuneration should be justified.

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