

RESEARCH ARTICLE

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Views of General Public and Creating Awareness on the Role of Pharmacist in Health Care

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Abstract

Pharmacies are natural first port of call healthcare providers in society who connect the gap between doctors and patients for optimal and rational use of the medicines although the public perception on pharmacists as a healthcare professional is ambiguous. There is a great need to generate awareness in the public as well as other health care professionals about the roles and responsibilities of pharmacists in the healthcare system. The objectives of this study were to assess the approval of general public on the role of pharmacist in health care and to create awareness by educating using pamphlets. A total of 450 individuals were approached for the study, where 400 participated and 50 showed no interest. A validated Pre-awareness assessment questionnaire containing 15 questions and a set of five post education awareness assessment questions were prepared to assess the improvement in awareness level after pamphlet education. The study indicated that most of the respondents had poor awareness about the role of pharmacist to healthcare. Education levels of respondents were significantly associated with awareness levels of participants. The approval level was found to be average. The awareness level improved after creating awareness by educating via pamphlet.

Keywords: Pharmacist's roles and responsibilities, public awareness, approval.

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INTRODUCTION

The pharmacists are the most accessible healthcare professionals to the public. In some developed countries, Pharmacists are often ranked among the most trusted healthcare professionals [1]. The pharmacists perform a variety of functions, including procurement and dispensing of drugs, patient counseling and education, health promotion, drug information, and consultation services to the healthcare professionals, on the rational selection of medicines [2]. In India, pharmacies are generally called as medical stores, drug store, or chemist shop. According to most of the Indian population, only the supply of medicines remains the chief activity of the pharmacist [3].

Public perception on pharmacists as a healthcare professional is ambiguous. There is a great need to generate awareness in the public as well as other health care professionals about the roles and responsibilities of pharmacists in the healthcare system [2]. Hence, the study was aimed to assess the views of general public on

the role of pharmacists in the healthcare service and their perception about the services provided by them.

MATERIAL AND METHODS

A prospective interventional study of the general public was done in Peelamedu, Coimbatore. The inclusion criteria were both female and male above 18 years who can read and write English and Tamil. Those with dementia, psychiatric illness, deafness or visual impairment were excluded from the study. A total of 450 individuals were approached for the study, where 400 participated and 50 showed no interest. A Pre-awareness assessment questionnaire containing 15 questions covering the roles and responsibilities of pharmacist in health care was prepared and validated to assess the view of general public. Based on the questionnaire response, they were categorized as strongly aware (9-15), slightly aware (6-8) and least aware (0-5). A set of five post education awareness assessment questions were prepared to assess the improvement in awareness level of general public after pamphlet education. Respondents were educated using two different pamphlets.

Association between respondent's demographics and awareness level was analysed using Pearson Correlation and Chi-Square test. Difference in awareness level of respondents before and after education using pamphlets was analysed using Paired t test.

RESULTS

Respondent Demographics

The study classified the respondent's demographic based on gender, age, education level, and field of occupation. The findings of respondent demographics are shown in Table 1.

Questionnaire Response

A Pre-awareness assessment questionnaire containing 15 questions covering the various roles and responsibilities of pharmacist in health care was prepared and validated to assess the view of general public and their response has been calculated.

Table 2 shows the response from each respondent which was compared with the expected response and the participants were given scores from 1-15. Based on the scores obtained, the pre-awareness level of general public regarding the roles and responsibilities of pharmacist in health care was categorized into- good (9-15), average (6-8), poor (5 & below) [table.3]. Out of 400 respondents, 40% had strong awareness (scores 9-8), 29% were slightly aware (scores 6-8) and 31% had least awareness (score 0-5). Respondents with average and poor scores were educated using pamphlets (n=236) regarding the roles and responsibilities of pharmacist in healthcare and their improvement in awareness levels were assessed using a post-education awareness questionnaire [table.4, 5].

Difference in Awareness Level before and after Education Using Pamphlet

Statistical Package for Social Sciences (SPSS) Version.23.0 for Windows was used for analysis. Paired t test, $P < 0.05$ was used for finding significant difference between before and after perception of general public. The significance (2-sided) for Paired t test should be less than 0.05.

Fig.2 shows the mean values of difference in awareness before and after creating awareness using pamphlets. The result was statistical significance. Therefore, there is a significant difference in awareness level before and after education of general public using pamphlets.

Association between Respondents Demographics and Awareness Level

The statistical analysis used are Pearson Correlation and Chi-Square test, $P < 0.05$.

Significant association was found between education status and awareness level of the respondents under the study [table.6].

Out of 164 respondents who had good awareness, majority had high levels of education (Undergraduate/Postgraduate) [table.7]

Significant association was found between occupational field and awareness level of the respondents under the study [tab.8]

Assessment of Approval of Other Health Care Professionals towards Clinical Services Rendered By Pharmacist at Hospitals

The approval of other health care professionals towards clinical services rendered by pharmacists after creating awareness via pamphlet is shown in Fig.2. P value was found to be 0.000. Since P value is less than 0.05, it showed statistical significance in awareness level of other healthcare professionals before and after education

Assessment of Improvement in General Public's View on Pharmacist

P value was found to be 0.000. Since P value is less than 0.05, it showed statistical significance. Therefore, there is a significant difference in awareness level of general public after pamphlet education [fig.3]

DISCUSSION

After literature review, it was found that there is little awareness of pharmacist's involvement in providing services designed to improve health care among the general public and a need exists to create awareness effectively.[4] Studies have supported that the public's acceptance of expanded scope of practice services by pharmacists is present in other countries.[5] Whereas in India not many studies have been done to understand the perception and acceptance of the general public regarding the role of pharmacist in healthcare setting. The current Indian scenario shows lack of knowledge and awareness among the public which is inhibiting the pharmacist to render their services which creates a lacuna in health care system. [6] This study mainly focused on assessing the knowledge and creating awareness among public about the role of pharmacist in health care services other than drug dispensing.

A study conducted by Jason Perpelkin et al revealed, females tend to have more awareness on pharmacists' services than males. [7] But in contrast, gender does not appear to play any significant role in this study. A study conducted by Mackowiak et al shows significant association between age group of the respondents with the awareness level. [8] In contrast, this study failed to show any significant association of age with the latter. A cross sectional study done by Omar Thanoon Dawood et al shows that respondents with higher education levels

have better awareness [9] [table.5]. Similarly, this study also implies the same. The respondents' education level were grouped into 4 categories and the majority of the respondents 272(68%) have received undergraduate / postgraduate (college/university) education. Significant association was found between education level and awareness level of the respondents. This study determined that the respondents under the category (Undergraduate)/ (Postgraduate) showed strong awareness about the role of pharmacist in comparison to other groups [table.6]. Other literatures have also revealed education level as an important factor to assess awareness levels. A study by Arebu Issa Bilal et.al revealed awareness exists due to the professional rapport and mutual respect shared among the healthcare team.[10] Similarly, this study showed that respondents belonging to non-medical field had poor awareness when compared to the respondents in the medical field. The awareness level of respondents belonging to medical field on the role of pharmacist was found to be high.

A study done by Abduelkarem A et al observed that the other healthcare professional's resistance to the role of clinical pharmacists might have been attributed to the lack of other health care professional's exposure to pharmacist's participation in clinical activities.[11] In this study, post education by pamphlets among respondents belonging to medical field, a significant improvement was found in the approval level when asked if they thought pharmacist's involvement in the patient care by assisting physicians, nurses and other health care professionals will improve the therapeutic outcome of the patients in the hospital [fig.3].

A significant improvement in views of general public towards the pharmacist's services was observed after pamphlet education [fig.2]. A study conducted by Maher R. Khmour et.al showed creating awareness plays an important role in increasing the public perception on pharmacists' services [12] [fig.4].

OTHER FINDINGS

While explaining the objective of this study to the respondents it was observed that some were unaware about the existence of a pharmacist as a health care professional. They believed that a person dispensing in a pharmacy to be a mere shopkeeper. Even after creating awareness about 8% of the respondents still believe that a pharmacist should stick to their role of dispensing [table.1]. About 74% of the respondents lacked awareness on pharmacist's role in lifestyle modification like smoking cessation, alcohol abstinence, drug abuse prevention etc., [table.1]. 75% of the general population lacked information about drug and poison information Centre [table.1]. The remaining population those who were aware mainly belonged to the medical field. About 71% of the respondents were unaware of the role of pharmacist in providing cost effective therapeutically beneficial service and also clinical pharmaceutical

services rendered in the hospital [table.1].78% of the respondents did not know about the role of pharmacist in reporting adverse drug reactions. The public were unaware neither of ADR reporting nor its importance [table1]. Though 91% of the respondents consider pharmacist as an acceptable and trusted source of advice, 9% refused to trust even after education and counselling [table.3].

Limitation: The respondent demographics are not wholly representative of the population of Coimbatore, so this lessens the generalizability of the results to the general public as a whole. Though awareness was provided through pamphlets, follow up of the respondents could not be done to assure if they had approached pharmacists to receive healthcare services and hence could not analyze their satisfaction to the pharmaceutical services.

Future Outlook: This study may be supplemented with possible future research on a larger scale to strengthen the conclusions drawn about the view of general public regarding the role of pharmacist in healthcare.

REFERENCES

- [1] Kelly DV, Young S, Phillips L, Clark D. Patient attitudes regarding the role of the pharmacist and interest in expanded Pharmacist Services. *Can Pharm J (Ott)*. 2014;147(4): 239–247.
- [2] H Sharma, D Jindal, M Aqil, MS Alam, S Karim, P Kapur. A survey for assessment of the role of pharmacist in community pharmacy service. *J Pharm Bioall Sci*.2009; 1:23-6.
- [3] Basak SC, Sathyanarayana D. Community Pharmacy Practice in India: Past, Present and Future. *South Med Rev*. 2009; 2(1):11–14.
- [4] Janet Krska, Charles W. Morecroft. Views of the general public on the role of pharmacy in public health. *J Pharm Health Services Res*.2009;1.
- [5] Bishop AC, Boyle TA, Morrison B, Barker JR, Zwicker B, Mahaffey T et al., Public perceptions of pharmacist expanded scope of practice services in Nova Scotia. *Can Pharm J (Ott)*. 2015;148(5):274-283
- [6] Prasanna R. Deshpande et.al. Clinical pharmacists: The major support to Indian healthcare system in near future. *J Pharm Bioallied Sci*. 2015;7(3):161–174.
- [7] Jason Perepelkin. Public Opinion of Pharmacists and Pharmacist Prescribing. *Canadian Pharmacists Journal*. Volume: 144 issue: 2, March 1, 2011.
- [8] Mackowiak JI, Manasse HR. Expectation vs. demand for pharmacy services. *J Pharm Mark Manage*.1988; 28:765-775.
- [9] Omar Thanoon Dawood et.al. Factors affecting knowledge and practice of medicine use among the general public in the State of Penang,

Malaysia. J Pharm Heal Ser Res. <https://doi.org/10.1111/jphs.12167>

- [10] Arebu Issa Bilal et.al. Attitude and satisfaction of health care providers towards clinical pharmacy services in Ethiopia: A post-deployment survey. J Pharm Policy Pract. 2016; 9:7.
- [11] Abduelkarem A, Sharif S. Current levels of interaction between the physician and pharmacist:

A comparative study in Libya and UAE. Jordan J Pharm Sci. 2008; 1:146–155.

- [12] Maher R. Khmour and Hussein O. Hallak. Societal perspectives on community pharmacy services in West Bank- Palestine. Pharm Pract (Granada). Pharm Pract (Granada).2012;10(1): 17–24.

TABLES AND FIGURE LEGENDS

Table 1: Respondent Demographics Findings

RESPONDENT DEMOGRAPHICS n=400					
Gender	Male= 204 (51%)			Female 196 (49%)	
Age	18-28yrs = 150 (37.5%)	29-39yrs = 90 (22.5%)	40-50= 80 (20%)	51-61 = 60 (15%)	62 & above = 20 (5%)
Education level	Primary = 16 (4%)	Secondary = 64 (16%)	Higher secondary = 48 (12%)	UG/PG =72 (68%)	
Field	Medical = 117 (29%)			Non-medical = 283 (71%)	

Table 2: Pre-awareness assessment questionnaire and their response from general public

S.no	Questions	Expected response	Number of respondents (n=400)		Percentage distribution	
			YES	NO	YES	NO
1	1.Do you think pharmacist's role is only to dispense medicines	NO	100	300	25%	75%
2	Are you aware of pharmacist's role in areas other than pharmacy (hospitals, clinical, drug manufacturing industries, the government, the military etc)?	YES	288	112	72%	28%
3	Do you approach a pharmacist directly in case of conditions like fever, common cold, diarrhea, vomiting, minor pain etc?	YES	253	147	63%	37%
4	Do you know about poison and drug information Centre?	YES	99	301	25%	75%
5	Do you prefer going to pharmacist for your drug and related doubts?	YES	247	153	62%	38%
6	Are you aware of the fact that pharmacists have the expertise to provide drug related information to public and healthcare professionals on safe and effective medication use?	YES	210	190	53%	47%
7	Do you think pharmacist can help you in lifestyle modification (quit smoking, alcohol abstinence, prevent drug abuse)?	YES	105	295	26%	74%
8	Do you know about pharmacist's role in immunization and health awareness programmes conducted by the government & other NGOs?	YES	137	263	34%	66%
9	Do you uptake pharmacist referral for health screening and physician consultation?	YES	242	138	66%	34%
10	Do you know about pharmacist care at hospitals?	YES	148	252	37%	63%
11	Do you know that pharmacist roles to assist physicians, nurses and other healthcare professionals to bring out better therapeutic outcome for patients at hospitals?	YES	175	225	44%	56%

12	Do you know that pharmacist utilize their clinical expertise in monitoring & management of long term illness like diabetes mellitus, hypertension, asthma, COPD etc with collaborative drug therapy management to deliver cost-effective services?	YES	116	284	29%	71%
13	Do you know that it is the responsibility of a pharmacist to report adverse drug reaction (ADR)?	YES	90	310	23%	77%
14	Have you received counselling from pharmacist regarding purpose of medication, how medication is administered, dose and duration of therapy, side effects and how to deal with them, specific instructions and life style modification while on medication?	YES	251	149	63%	37%
15	Do you consider pharmacist as an accessible and trusted source of advice?	YES	365	35	91%	9%

Table 3: classification of pre-awareness level based on scores

Pre-Awareness Level Based On Scores *Total Score=15	No. Of Respondents (N=400)	% Distribution
Good (9-15)	161	40%
Average (6-8)	114	29%
Poor (5 & below)	125	31%
Total	400	

Table 4: Post- education awareness assessment questionnaire and their response from general public who had average and poor scores in pre-awareness assessment

S.No	Questions	Expected Response	Number Of Respondents		Percentage Distribution	
			YES	NO	YES	NO
1	Do you still think pharmacist should only dispense medicines?	NO	19	217	8	92
2	Do you now consider pharmacist as health care professionals?	YES	170	66	72	28
3	From now would you consider approaching a pharmacist for drug related doubts/queries?	YES	165	71	70	30
4	Do you think pharmacist's involvement in the patient care by assisting Physicians, Nurses and other health care professionals will improve the therapeutic outcome of the patients in the hospitals?	YES	124	112	53	47
5	Do you consider pharmacist to be an accessible and trusted source of advice?	YES	215	21	91	9

Table 5: Classification of post- education awareness level based on scores

Post Education Awareness Level Based On Scores *Total Score= 5	No. Of Respondents	% Distribution
Good(5)	88	37%
Average (3-4)	112	47%
Poor(0-2)	39	16%
Total	236	

Table 6: Association between education level and awareness level

	Awareness about the role of pharmacist in health care			Total
	Poor	Average	Good	

Education status	Primary	9	4	4	17
	Secondary	27	18	18	63
	Higher secondary	19	16	15	50
	Undergraduate/Postgraduate	58	89	123	270
Total		113	127	160	400

Table 7: Distribution of good awareness level based on education level
**n=164 (respondents with score 9-15)*UG/PG=Undergraduate/Postgraduate*

Education Level	Number Of Respondents With Good Awareness	% Distribution
Primary	3	2%
Secondary	19	11%
Higher Secondary	18	11%
UG/PG	124	76%

Table 8: Association between field of the respondents and awareness level

	Awareness about the role of pharmacist in health care			Total
	1=Poor	2=Average	3=Good	
Medical	15	33	70	118
Non-Medical	98	94	90	282
Total	113	127	160	400

Table 9: Questions correlating to the approval of other health care professionals towards clinical services rendered by pharmacists after creating awareness via pamphlet.

Pre-awareness assessment question no:11 n=225	Post-awareness assessment question no:4 n=124
Do you know that pharmacist roles to assist physicians, nurses and other healthcare professionals to bring out better therapeutic outcome for patients at hospitals?	Do you think pharmacist's involvement in the patient care by assisting Physicians, Nurses and other health care professionals will improve the therapeutic outcome of the patients in the hospitals?

**This includes the respondents belonging to the medical field with poor awareness scores for question no: 11 in pre-assessment questionnaire [table.2] and reassessed after education with question no: 4 in post-awareness assessment questionnaire [table.4].*

Table 10: Questions correlating to the improvement in general public's view on pharmacist

Pre-awareness assessment question no:15	Post-awareness assessment question no:5
Do you consider pharmacist as an accessible and trusted source of advice?	Do you consider pharmacist to be an accessible and trusted source of advice?

**this includes the respondents who answered "no" to question no: 15 in pre-awareness questionnaire [table.2] and their response was compared after education and reassessed with question no: 5 in post-awareness assessment questionnaire [table.4].*



Fig 1: Mean values of before and after awareness assessment

APPROVAL OF OTHER HEALTH CARE PROFESSIONALS TOWARDS CLINICAL SERVICES RENDERED BY PHARMACISTS AT HOSPITALS

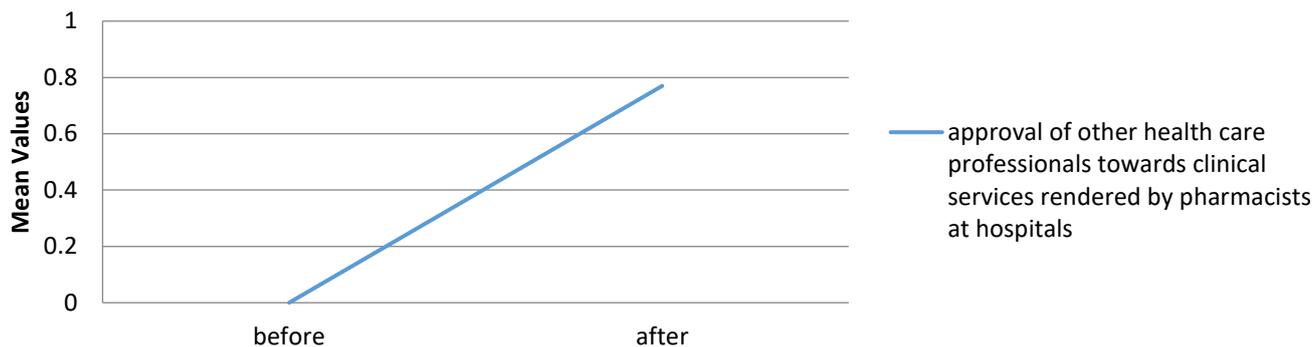


Fig 2: Mean values of approval of other health care professionals towards clinical services rendered by pharmacists after creating awareness via pamphlet.

IMPROVEMENT IN GENERAL PUBLIC'S VIEW ON PHARMACIST

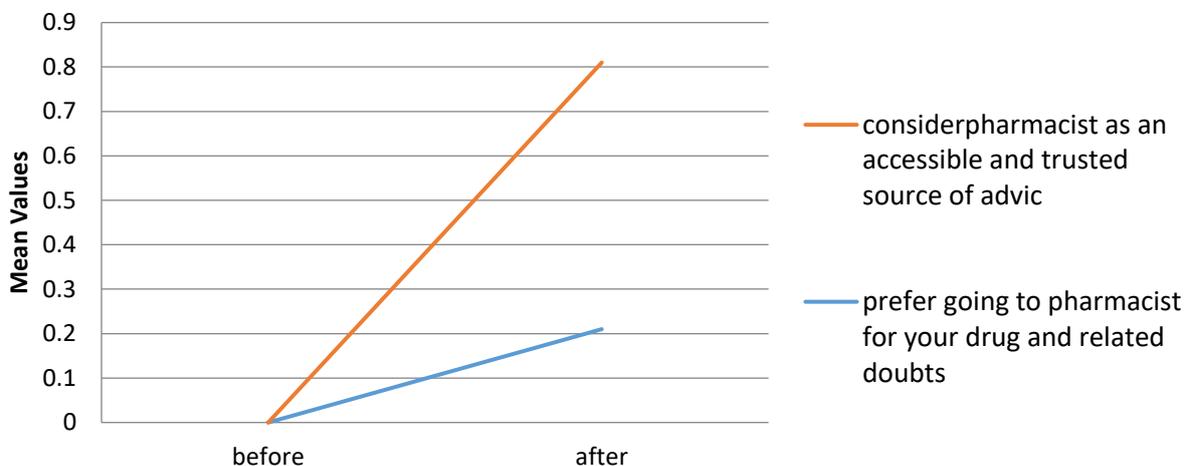


Fig 3: Improvement in general public's view on pharmacist

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