

Original Article

Knowledge about evidence based pharmaceutical care in medical and non-medical population of Lahore, Pakistan

Sundas Sohail¹, Filza Shoukat¹, Aisha Mukhtar¹, Halima Shoukat¹, Arooj Fatima^{1*}, Faiza Sharif¹, Ashfaq Ahmad¹ and Syed Amir Gilani¹

¹University Institute of Physical Therapy, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan

*aruj43@hotmail.com

Abstract: Pharmaceutical care related services provided by pharmacists in the community are mainly taking patients' medication history, informing patients about use of medications, informing patients about medication storage, and provide information about drug and/or food interaction. **Objective:** To evaluate the knowledge about evidence based pharmaceutical care in medical and non-medical population of Lahore, Pakistan. **Methods:** A sample of 100 participants was drawn by using non-convenient sampling in this cross-sectional survey. Survey was conducted within the duration of 6 months from 2nd June, 2020 to 15th December, 2020. Data was collected from participants of different universities, societies and hospitals, having age between 25-40 years, both genders without discrimination of profession. Data was analyzed using SPSS version 21.0. Qualitative data was calculated using frequencies and percentages. **Results:** In this study 63% medical and 37% non-medical participants respond to questionnaire. About 34% of the population had knowledge about pharmaceutical care. Almost 23% had lack of knowledge about pharmaceutical care while 43% participants did not respond. **Conclusions:** The knowledge about pharmaceutical care in general community is very vital and pharmacist should provide knowledge and pharmaceutical care services to the patients.

Keywords: evidence-based practice; pharmaceutical care; pharmaceutical practice; pharmacist

Introduction:

Pharmaceutical care (PC) is the most important factor of healthcare system and is the liable facility of drug therapy for improving patient's quality of life. PC is associated on a connection between the patient and the other healthcare facilitators who consent to patient's responsibility. This idea suggests the active involvement of the patient in decisions of medicine therapy, the assistance of healthcare facilitators from different disciplines, and contributes direct benefits for the patients. The goal of PC is to optimize the patient's health-related quality of life (QoL), and to achieve positive clinical outcomes, within realistic economic expenditures [1].

Establishing evidence-based practice (EBP) is important for pharmaceutical care services to be effective, updated and relevant to patients. Pharmacists must accept and actively participate in the research needed to establish the required evidence-based pharmaceutical care (EBPC) [2].

Pharmaceutical care has been described as the pharmacy profession's mission statement as it moves into the 21st century. Although PC has generally been adopted in principle, many pharmacists still struggle to make it an integral part of their practice. Hospital pharmacists, as a professional group, have been given the opportunity to develop a process to identify and

solve drug-related problems (DRPs) and thus develop pharmacy care plans for patients. In the past few years[3], it was reported that a new innovative concept 'EBPC' seems promising practice to improve the quality of the PC [4].

Pharmaceutical care basically means improving the medication use process in order to improve outcomes, including the patients' QoL, and that involves a focus change for pharmacy from product to patient. The way to prevent, detect and correct DRPs in a patient is to systematically analyze the patient, his drug profile and drug use behavior which is included in PC [5]. Pharmaceutical care emphasize on the main purpose of clinical pharmacy, so that it must be recognize as professional practice other than a health science only. It defines a system that clinical pharmacy with team of specialists and their subspecialists might synchronize their work more efficiently. The concept of clinical pharmacy adds essential clarity about the process component of pharmacists' participation in, and strengthens the academic basis of PC [6]. Medication non-adherence is most simply defined as the number of doses not taken or taken incorrectly Non-adherence to pharmacotherapy has been shown to decrease productivity and increase disease morbidity. To improve adherence to pharmacotherapy, pharmacists play a major role which is important factor of PC [7].

Almost 83% patients satisfaction is reported after pharmacist advice and counselling so trust between patient and pharmacist is quite high [8]. Worldwide pharmacists are given more responsibilities towards patients [9]. PC needs new practitioners which can directly provide patient care [10]. A greater understanding of nuances of pharmaceutical practice (PP) should be obtained by using techniques including qualitative methods, this methodology might help in creating important modifications to produce effective pharmaceutical care practice (PCP)[11].

Researches indicated that pharmacists provide PC to patients worldwide during covid-19

pandemic. Pharmaceutical care has played a vital role in patient compliance[12]. Pharmaceutical care ensure safe and effective use of medicines in COVID-19 patients[13].

To provide better PC among patients, there should be a stronger bond between pharmacists and other health care professionals[14]. Nurses also play a vital role in pharmacotherapy along with pharmacists[15]. Mostly community pharmacists are more eager to provide pharmaceutical care to elderly patients[16]. Implementation pharmaceutical services and knowledge in the health system to achieve therapeutic goals [17].

They ensured on time drug supply and kept a vigilant eye on adverse drug reactions(ADR's) through proper medication guidance and review, thus refining patient compliance[18]. For better results, doctors and pharmacists should continue to ensure drug safety collectively. Under less human resources, implementation of PC model might be helpful to guide PP with improved efficacy[19]. PCP implementation can be tough and challenging with identification, intervention as well as resolution of DRPs and obstacles [20]. PC is also vital for management of chronic obstructive pulmonary disease (COPD) patients [21]. The current study was designed to assess the knowledge about pharmaceutical care in medical and non-medical population in Lahore, Pakistan.

Methods:

A cross-sectional survey was conducted on sample of 100 participants by using non-convenient sampling. Survey was conducted within the duration of 6 months from 2nd Jan, 2020 to 15th June, 2020. Evaluation about knowledge of pharmaceutical care in medical and non-medical population was performed through questionnaire that contained different number of questions related to the knowledge of PC in general population. Data was collected from participants of different universities, societies and hospitals, having age between 25-40 years, both genders without discrimination of

profession. Data was analyzed using SPSS version 21.0. Qualitative data was calculated using frequencies and percentages.

Results:

In this study, 100 participants were included with 60% females and 40% males. 63% were included with medical background and 37% were non-medical population (Table 1). Results indicated that medical professionals had more knowledge about pharmaceutical care comparative to those with non-medical background. 34 % participants had knowledge regarding pharmaceutical care, 23% had no knowledge and 43% didn't responded (Table 2). Regarding the professions of the participants, 46% were pharmacists, 2% were physicians and 2% were nurses (Table 3). 51% of the participants faced drug related problems oftenly, 33% sometimes and 6% have rarely faced (Table 4).

Variables	Frequency (%)	Cumulative Percent
Medical	63.0	63
Non-Medical	37.0	37
Total	100	100

Table 1: Number of medical and non-medical participants (n=100)

Variables	Frequency (%)	Cumulative Percent
No Response	43	
Yes	34	59.6
No	23	100.0
Total	100	

Table 2: Knowledge about pharmaceutical care

Variables	Frequency (%)	Cumulative percent
Physician	2	4.0
Pharmacist	46	96.0
Nurse	2	100.0
Total	50	
	100	

Table 3: Professions involved in pharmaceutical care

Variables	Frequency (%)	Cumulative Percent
often	51	56.7
Sometimes	33	93.3
Rarely	6	100.0
Total	90	
	100	

Table 4: Patients experiencing drug-related problems

Discussion:

Data was collected from Private and Government Educational Institutes, Lahore residents and from some hospitals by means of questionnaire regarding knowledge of pharmaceutical care in general population and medical and health care professionals in Lahore, Pakistan.

A previous study in 2021 suggested the role of community pharmacist in prescribing medicines to elderly patients. A cross sectional survey was conducted in which total 354 pharmacists answered the questionnaire. The study showed that community pharmacists have vital impact on pharmaceutical care of elderly patients[22]. Current study also supported the fact that pharmaceutical care is an effective mean to improve health care facility in various patients. Another study was conducted which showed the impact of pharmaceutical care on patients[23]. Two hypertensive patient groups with pharmacists were included Pharmacists in study group provided pharmaceutical care, pharmacotherapy, and knowledge about drug related issues to patients in control group basic pharmaceutical services with or without proper pharmacist counselling was provided. Pharmacists who provided pharmaceutical care in study group had greater pharmacotherapy knowledge and satisfaction comparative to pharmacists in control group. Hence it was proved that implementation of PC is beneficial for both pharmacists and patients. These findings were closely related to current study that pharmaceutical care had beneficial effects

on patient Another study took place in Jordan regarding PC in pediatric patients [24]. Total 400 final year students in Jordan filled questionnaire and participated in study. Findings indicated deficiency of pediatric PC knowledge in students. Current study findings also showed lack of PC knowledge in some people from medical and non-medical background.

Previous cross sectional study in 2018 was conducted in eastern Ethiopia to evaluate knowledge about and pharmaceutical care in community and hospital pharmacists [25]. Pharmacists from hospital and community were involved and data was collected. Data was analyzed by SPSS.85.9% had knowledge about pharmaceutical care. Mainly pharmacists from community pharmacy and hospitals were aware of PC. Nevertheless, some pharmacists had an unfavorable response towards PC. These findings are also supporting the findings of the current study.

Conclusions:

People with medical background had more knowledge about PC as compared to those with non-medical background. However, pharmacists can increase the drug therapy quality by refining the structures of organization by which drug therapy is delivered, precisely by generating effective system for medication use and by evaluating performances on regular basis.

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