

**CLINICAL PHARMACY PROFESSION IN THE EYES OF
HEALTHCARE PROVIDERS IN UAE****Sundos Qassim^{1*}, Fatima Boura¹, Sahar Munir², Yassin Al Harirri¹ and Zakia Metwali³**¹Ajman University, Clinical Pharmacy and Pharmacy Practice Department.²Dar Al Shifaa Day Care Surgery Hospital.³Alexandria University.

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346.**ABSTRACT**

Clinical pharmacist can play a unique role in ensuring the rational use of medicine and improving the health related quality of life among different patients. A cross-sectional study, conducted from February 2015 through May 2015 aimed to investigate the acceptance level of integrating clinical pharmacists into the healthcare team. The study was conducted by using a convenience sampling method; a structured questionnaire had been distributed among 177 healthcare providers. Point scoring was used to assess the questionnaire parts. All answers and scores of every participant coded and entered in SPSS 20 software. The relationship between attitude and perception of healthcare providers toward Clinical Pharmacy Services in UAE investigated using Spearman's Rank Order Correlation (ρ). There was a positive correlation between the two variables. The current

research confirmed previous findings that more efforts should be achieved to improve healthcare providers awareness about the importance of collaboration with clinical pharmacists and what benefits can be reflected on patient's health-related quality of life and health care in general.

KEYWORDS: Clinical pharmacy. Clinical Pharmacists. Healthcare providers. Attitude. Perception. Patient care

INTRODUCTION

During the early 1990s, the Clinical Pharmacy concept was practiced in a way where pharmacists provide patients care that optimizes medication therapy and promotes health wellness and disease preventions.^[1] As pharmacy services expanded, there was increasing specialization in the pharmacy field. Clinical pharmacy is a recent area of practice in which pharmacist focus on patient oriented rather than drug oriented services.^[1-4] Clinical pharmacy is the provision of proactive service where pharmacists directly interact in the patient care process through communicating with patients and other health care providers (HCPs).^[3] Over the past two decades, a growing body of evidence has demonstrated that clinical pharmacy ensures better patient outcomes and improves patient quality of life.^[5] Thus, wide number of pharmacists brought out of the dispensary role as drug consultant to the wards as patient care providers.^[6] Internationally developed countries are the leading nations in clinical pharmacy profession, Pharmacists role have been shifted from the traditional services to more patient's specific services.^[3] United Arab Emirates (UAE) pharmacists are available in different disciplines such as community pharmacy, hospital, industry, regulatory bodies, sales and marketing, academia, research, and drug distribution.^[7] Limited number of pharmacist employed as patient care provider as being clinical pharmacist (CP).^[4,7,8] Unfortunately, clinical pharmacy services in UAE private and public health care settings are rare except Abu Dhabi and to certain extend in Dubai.^[7,8] There is increasing evidence that the interaction between HCPs and CP ensure the goal of better patient outcomes, less therapeutic failure, more safe therapy and optimum cost effectiveness value.^[3] Number of studies described the physician pharmacist relationship as being complex.^[9,10] Recent studies concluded that the known clinical pharmacy achievements are highly determined by lots of factors such as knowledge, attitude and perception of HCPs toward clinical pharmacy profession.^[11,12] Thus, it's essential and critical to ensure and maintain HCPs positive attitude and perception toward clinical pharmacists (CPs) direct contribution to patient care provision.^[3] The current study aimed to investigate the level of acceptance of integrating CPs into the healthcare team. More specifically, to assess the perception of HCPs regarding the CP roles and responsibilities in providing better pharmaceutical care to patients in UAE. In addition, to explore HCPs' attitudes to the pharmaceutical services that CP can provide in UAE and to determine the association between HCPs attitude and perception toward the role of CPs. The study data will provide a useful base line data that help in the assessment and establishing future plans for the progress of Clinical pharmacy services in UAE. In addition, the study results will help in

the progress of Clinical pharmacy services by exploring the current HCPs attitude, perceptions and acceptance to clinical pharmacy profession.

METHODOLOGY

Convenience sampling was collected from 3 cities: Abu Dhabi, Sharjah and Ajman. This study was conducted in 12 hospitals, 9 clinics and 6 community pharmacies. A structured questionnaire was designed by the researchers based on the parameters to be evaluated as part of the study and by referring to previous literature.^[8,13] The questionnaire was modified to make it convenient for HCPs in UAE. In addition, Face validity was done by university lecturers and experts. A pilot study was conducted among ten HCPs to test the validity and the reliability of the survey form, to determine the time needed for data collection and to revise and finalize the questionnaire. Their views and comments were taken in consideration and then inserted, where appropriate, into the final form of the questionnaire. The final developed questionnaire designed to be interview - administrated and to be completed in 5 minutes in order to increase the response rate. The questionnaire included closed questions. Part 1: includes 6 questions covered the Socio-demographic characteristics. Part 2: 8 questions were designed to measure the level of perception of HCPs towards the role of CP. Part 3: 5 questions were designed to measure the attitude of HCPs towards the role of CP. Part 2 and 3 items were worded as a series of statements and the HCPs were asked to indicate their agreement or disagreement on a 3-point Likert scale from 'agree' to 'disagree'. Both genders of registered HCPs in UAE and who were willing to participate in the study were included. Clinical pharmacists, Unregistered HCPs and Visitor HCPs were excluded from the study. HCPs willing to participate in the study were provided with the study information sheet with a clear fully verbal explanation about the study and in addition they were requested to sign the informed consent form. Point scoring was used to assess the perception part, every positive answer assigned 1-point score, negative answer assigned 0, maximum score was 8, minimum was 0. The same score was used for attitude part, with maximum score of 5 and minimum of 0. For positive perception and attitude items, a score of 1,0,0 were given respectively for agree, neutral, and disagree. These scores were reversed for the negative perception and attitude items. Score was computed as continuous variable. All answers and scores of every participant were coded and entered in SPSS 20 software. Spearman test was used to determine the relationship between the perceptions and attitudes of HCPs toward the role of CP in UAE.

RESULTS

The questionnaire was distributed to 177 HCPs. the response rate was 90.9% in which the total number of the surveyed HCP was 161 including 60 physicians (37%), 53 pharmacists (33%), 36 nurses (22%) & 12 others (8%).

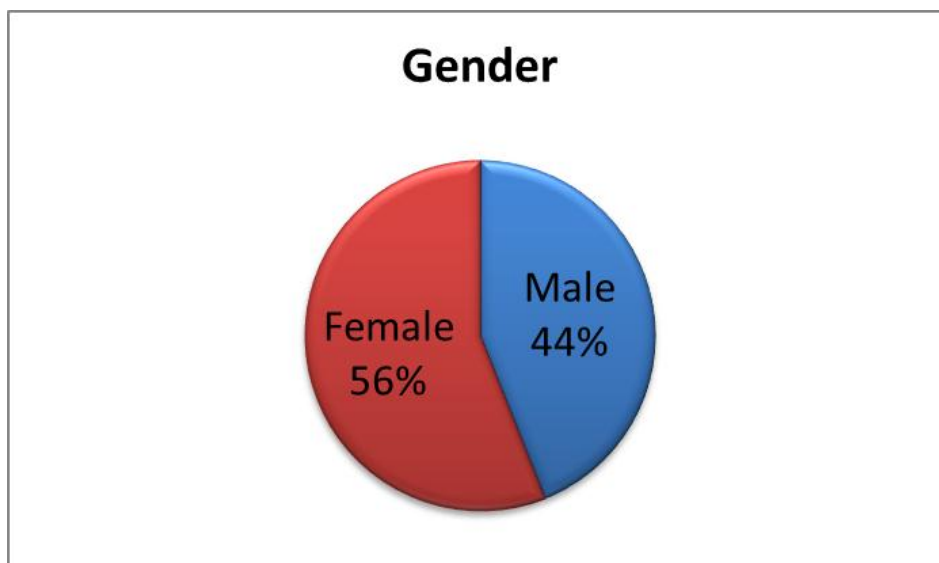


Fig. 1 Distribution of participants according to their gender

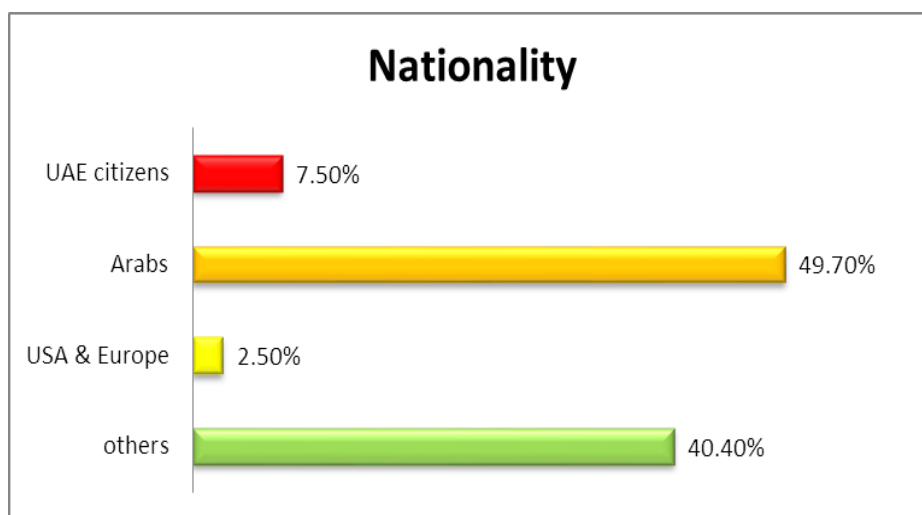


Fig. 2 Distribution of participants according to their nationalities

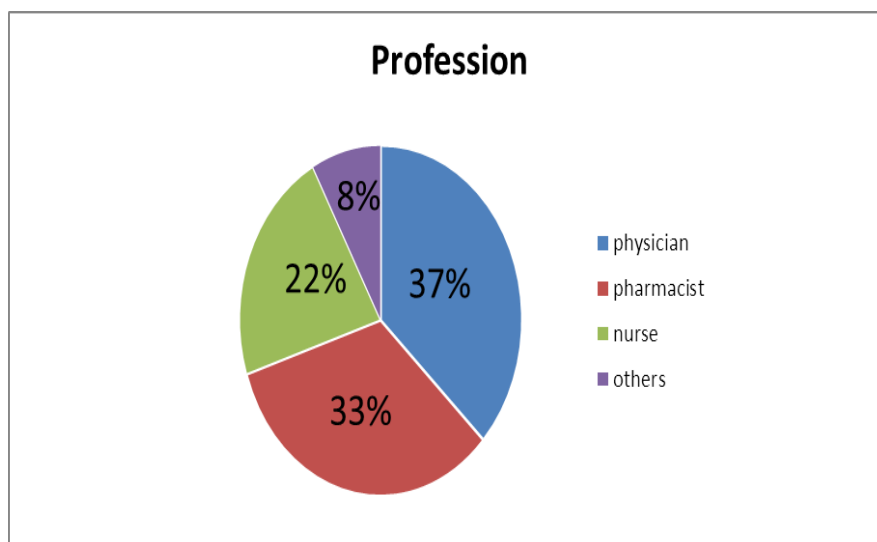


Fig. 3 Distribution of participants according to their professions

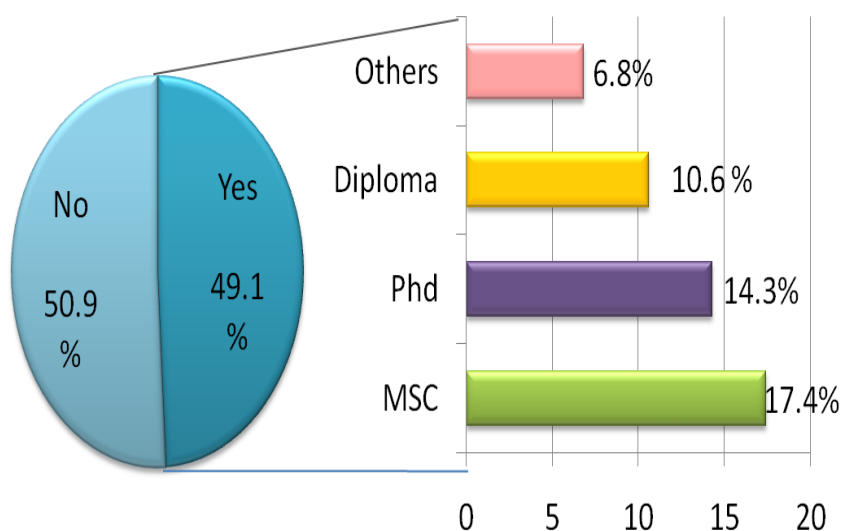


Fig. 4 Distribution of participants according to their postgraduate degrees

For Perception items the percentage ranged from 72.7% to 95%. Perception score ranged from the lowest score of 0 (0%) to the highest score of 8 (22.8%) with Mean (SD) score is 6.5280 (1.2453). Ninety percent of the participants (146) had a positive perception while 9.3% (15) had negative perception. Male Positive Perception was 97.2% while the Female positive perception was 85.6%. The details of the HCPS response for perception questions are listed in table (1).

Table 1: Responses to the perception related questions.

Statement	Agree				Neutral or Disagree			
	Male		Female		Male		Female	
	N	%	N	%	N	%	N	%
Healthcare professional's willingness to cooperate with the clinical pharmacist.	59	83.1	78	86.7	12	16.9	12	13.3
The clinical pharmacist is an important integral part of the clinical ward team.	69	97.2	84	93.3	2	2.8	6	6.7
The clinical pharmacist can improve the quality of patient care in a hospital setting.	61	85.9	73	81.1	10	14.1	17	18.9
The clinical pharmacist can acquire training in certain medical areas to perform patient counseling.	60	84.5	75	83.3	11	15.5	15	16.7
The clinical pharmacist is able to minimize medication error and improve patient therapy outcomes.	68	95.8	82	91.1	3	4.2	8	8.6
There is increased interest in clinical pharmacy services in UAE.	38	53.5	34	37.8	33	46.5	56	62.2
The clinical pharmacist has a role in patient medication education.	68	95.8	85	94.4	3	4.2	5	5.6
I want to have a clinical pharmacist in my institution.	51	71.8	66	73.3	20	28.2	24	26.7

Attitude score ranged from the lowest score of 0 (3.1%) to the highest score of 5 (13%). Mean (SD) score is 3.3975 (1.19520). Eighty percent (130) had positive attitude score, while 19.1% (31) had negative attitude score. Positive attitude score in male was 76.1% while the positive attitude score in female was 84.4%. The details of HCPs response to attitude questions are listed in table (2).

Table 2: Responses to the attitude related questions.

Statement	Agree				Neutral or Disagree			
	Male		Female		Male		Female	
	N	%	N	%	N	%	N	%
I think clinical pharmacist should be allowed to interchange similar medications without consultation with the physician. n	19	26.8	21	23.3	52	73.2	69	76.7
I think clinical pharmacist has important role in answering patient, physician and nurses about drugs. P	65	91.5	84	93.3	6	8.5	6	6.7
I think clinical pharmacist has the right to suggest changes of therapy to physician when necessary. p	46	64.8	74	82.2	25	35.2	16	17.8
I think clinical pharmacist should access the patient medical record. p	44	62	68	75.6	27	38	22	24.4

I think clinical pharmacist can takes part in conducting clinical trials for medicines & assesses results concerning cost effectiveness. P	58	81.7	68	75.6	13	18.3	22	24.4
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p:positive attitude item. n :negative attitude item.

For positive attitude items, where HCPs should have, the percentage ranged from 69.6% to 92.5% as in figure 5. Regarding “answering patient and HCPs questions”, 91.5% HCPs agreed with this statement.

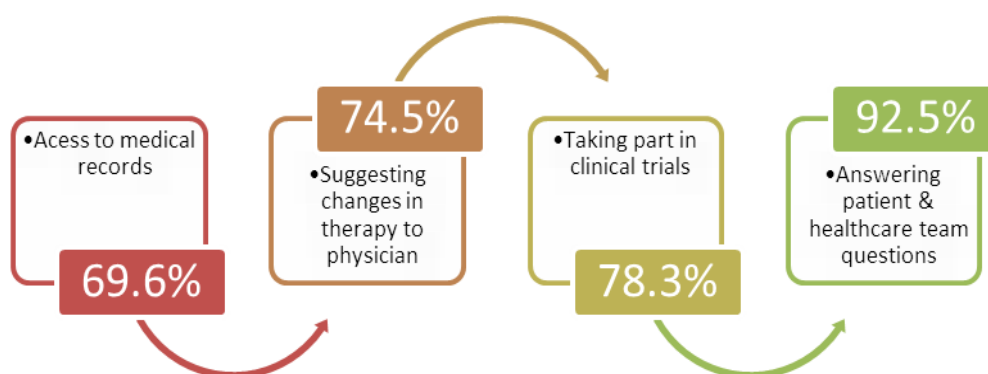


Fig.5 Positive attitude items.

While for the negative attitude item, where HCPs should not have, the percentage of 24.8% was recorded for participants who think that CP is allowed to interchange similar medications without consultation with the physician.

Table 3: Physicians response to attitude items

Physician			
Wanting clinical pharmacist	Suggestion change in therapy to physicians	Access to medical records	Taking part in clinical trials
20.3%	32.2%	32.2%	22%

Table 4: Nurses response to attitude items

Nurses				
Wanting clinical pharmacist	Improving quality of life	Taking part of clinical trials	Access medical record	Suggesting change in therapy to physician
27.8% disagree	27.8% disagree	27.8% disagree	38.9% disagree	27.8% disagree

Table 5: Pharmacists response to attitude items

Pharmacist			
Willingness to cooperate	Interchanging medication alone	Interested in clinical pharmacy in UAE	Wanting clinical pharmacist
32.1% disagree	54.7% disagree	69.8% disagree	30.2% disagree

The relationship between attitude and perception of HCPs toward Clinical Pharmacy Services in UAE was investigated using Spearman's Rank Order Correlation (ρ). Preliminary analysis was performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a positive correlation between the two variables, $\rho=0.176$, $p<0.05$, if the perception of HCPs improved then the HCPs attitude toward CPS role also improves.

DISCUSSION

Limited implementation of clinical pharmacy in UAE has been reported.^[4,7,8] Researches have showed that, cooperation between pharmacists and HCPs successfully implement pharmaceutical care to ensure the goal of effective, safe and less cost drug therapy.^[3] In the current observational study, around half of the participants 55.3% stated that there is no increased interest in clinical pharmacy services in UAE as well as it requires many improvements, unlike other studies conducted in developed countries where the majority reported increase demands for clinical pharmacy profession. New measures to promote and extend clinical pharmacy services in both governmental and private hospitals in UAE should be adopted and implemented in UAE.

As 16.8% of the participants believed that C.Ps can not improve patients quality of life, great efforts needed to be directed toward increasing HCPs knowledge about the proven positive impact of clinical pharmacy on patient health state. Importance of collaboration with clinical pharmacist and what benefits can be reflected from this on patient's quality of life and health care efficiency. The result of the study revealed that 27.3% believed that no need for C.Ps in their institution. Hospital physicians in Kuwait, Jordan and Sudan were comfortable with pharmacists detecting and preventing prescription errors and providing patient education, but were uncomfortable with pharmacists recommending drug therapy to patients, even for minor ailments.^[14-17] Thus, there is a need for UAE CPs to work more closely with HCPs, thereby providing them with an opportunity to observe pharmacists performing clinical responsibility leading to building the HCPs' need and trust to CPs. The current study showed that HCPs have high expectations about CPs as knowledgeable drug therapy experts can educate patients about the safe and appropriate use of medications (92.5%). Kuwaiti and Egyptian physicians reported similar expectations.^[13,18,19] However, 21.7% HCPs disagree that CP can take part in clinical trials, which reflects the fear of the physicians not to appear unwise and irrational and shows fears of legal consequences. Furthermore, the results of the study

revealed that HCPS had negative perception toward pharmacist's research skills, so we recommend more enhancing for such skills, which is the responsibility of pharmacy colleges and health care institutions. Around one quarter (25.5%) of HCPS disagree that C.P can suggests changes in therapy to physician, 32.2% of them were physicians, (Although 98.3% agree that they are willing to cooperate with clinical pharmacist), this negatively - believed attitude should be addressed extremely in any informative workshops to alleviate physicians' anxiety and to strengthen clinical confidence in C.Ps. Around one third (30.4%) of the HCPs disagree that C.P has the right to access to medical record, 18.9% of them were pharmacists. Academic pharmacy institutions should pay more attention to implement clinically oriented training programs for pharmacists and pharmacy students in order to increase their awareness about the facilities that clinical pharmacists can use to perform their duties. In addition, these findings advocate the need for awareness program for the HCPs about clinical pharmacists' professional duties and job description. More than half (54.7%) of the pharmacists participated in the study agree with interchanging similar medication alone without referring to physician while 24.8% of HCPs believed that clinical pharmacist can interchange similar medications without consultation the physician. This finding suggests urgent need to educate pharmacists & other HCPs about clinical pharmacy guidelines in UAE toward changing patient medications.

LIMITATION OF THE STUDY

Although the response rate was high, the study has some limitations with regard to the small sample size.

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