Migration Letters

Volume: 19, No: S5 (2022), pp. 1440-1446

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Nurse-Pharmacist Collaborations for Promoting Medication Safety in Pandemic and Epidemic Disease

Turki Zaki Almutairi[1], Faris Mahdi Salih Alzamanan[2], Muhammad Abdullah Alaghtani[3], Hegab Ali Saleh Alyami[4], Hamad Rashid Mohd Al Munajjim[5], Shaez Mohammed Muidh Alhussin[6], Nasser Ghanem Saleh Alqufayli[7], Nasser Ali Muhammad Al ALaharith[8], Mohammad Hadi Hergle Al Hammam[9], Raed Hadi Mohammad Al-Abbas[10]

Abstract

Objectives: The current study aims to discover nurses' expectations and experiences about pharmacists in private sector hospitals in Najran, Kingdom of Saudi Arabia.

Methods: A cross-sectional study was conducted from April to November 2021 in three private sector hospitals in Najran, Saudi Arabia. A convenience sample of nurses (n = 377) was enrolled in this study. Data were obtained through a previously validated questionnaire. Responses were statistically analyzed using SPSSv.22.

Results: Questionnaires were returned, giving a response rate of 63.6%, of which 20 were unusable (n = 240). Of the remaining 220, 24.1% (n = 53) responded that they never or rarely interacted with a pharmacist. Participants who expect pharmacists to collaborate with nurses to solve medication-related problems were 45%. Nurses' experience with pharmacists was not significant with only 44.5% of participants considering pharmacists a reliable source of clinical medication information.

Conclusion: Pharmacists are not well regarded by nurses in Medina, which necessitates pharmacists filling the perceived gap and using a more strategic and consistent approach to build a more positive image aligned with other healthcare professionals and in providing patient-centered pharmaceutical care.

Keywords: *Pharmacists, Pandemic, patient care.*

[1] Pharmacy assistant, Third health assembly.
[2] Nursing, Khabash General Hospital
[3] Nursing Technician, Al Harejah General Hospital, Comprehensive examination in Khobar
[4] Nursing technician, King Khaled hospital
[5] Nursing, King Khaled Hospital In Najran, Najran
[6] Public Health, KKH
[7] Nursing, Yadma Hospital - Sultana Urgent Care Center, NAJRAN
[8] Specialization: Epidemiological Monitor, the city is Najran, Work location (Khaled Hospital)
[9] Health information technician, : Erada and Mental Health Complex in Najran
[10] Physical therapy technician, Home medical care, Najran

Introduction

Health systems in the world seek to increase the quality of health services provided to patients and give it great importance [1]. It seeks to harness all resources for this, given the increasing demand for health care services, the spread of epidemics, limited resources, and high health care costs [2]. Cooperation between various medical specialties in providing health services in turn enhances patient care and contributes to providing better service [3]. Recently, pharmacists' services have been merging with various medical specialties, especially nursing [4]. Various researchers have reported that physician-pharmacist collaboration helped achieve improved clinical outcomes and improved patient care [5, 6]. However, the focus has always been on exploring the doctor-pharmacist relationship while the discussion on nurse-pharmacist collaboration has always remained confidential.

The introduction of clinical pharmacy as a discipline allowed pharmacists to change from their product-oriented role to become involved in patient-centered care, the main goal of which is to ensure the provision of optimal drug therapy to patients [7,8]. Clinical pharmacists are the primary source of information regarding drug activity and safety; They have responsibility for managing medication therapy and patient care [9].

Clinical pharmacy services have been widely developed in Saudi Arabia to provide high-quality patient care [10]. However, doctors may be reluctant to fully accept the role of clinical pharmacist for several reasons such as lack of awareness of the role of clinical pharmacist, doctors with medical qualifications before the 21st century, and absent or rarely encountering a pharmacist [10,11]. This study aims to evaluate nurses' perceptions regarding the role of pharmacists in private sector hospitals in the Kingdom of Saudi Arabia, and to shed light on the difficulties that nurses face when interacting with pharmacists.

Materials and Methods

Study design and setting

A cross-sectional study was conducted from April to November 2021 in three private sector hospitals in Najran, Saudi Arabia. A descriptive quantitative design will be used because the study will describe the level of collaboration between pharmacists and nurse practitioners, and data will be measured collectively to determine the extent of this. Obtaining ethical approval from the Ethics Committee of the Najran Health Directorate. The objectives and benefits of the study were explained to participants, and the importance of participant confidentiality and privacy was explained.

Study participants

The researcher used a census sample consisting of all pharmacists and nurse who work in government hospitals in the city of Najran. Data were collected in ten hospitals in the Najran region of Saudi Arabia A total of 377 nurses were selected for this study. The sample size was calculated by using Raosoft sample size calculator by keeping the margin of error as 5%, confidence interval as 95%, population size as 20,000 and response distribution as 50%.15 Convenient sampling technique is used to select a sample.

Study instruments

A structured questionnaire was used to conduct the survey. The measurement tool was carefully evaluated before release and ensured its validity and suitability to achieve the study objectives. The questionnaire was adapted from the study instrument which was validated and used for a research study in Kuwait [12]. A detailed discussion took place between the researchers, and

their opinion on the questionnaire was taken in terms of its relativity, simplicity, and importance.

Statistical methods

Data was analyzed utilizing Statistical Package for Social Sciences (SPSS version 23, SPSS Inc., Chicago, IL, USA). Descriptive and inferential analysis was carried out. . The results of each item on the questionnaire were reported, as percentages and frequencies. Chi-square test was utilized to test the important relationship between the independent variables (age, gender, current position and current area of practice) and dependent variables (expectations and experience). Statistical significance was accepted at p value of <0.05. The study protocol was approved by the institutional research ethics committee. Furthermore, written consent was obtained from the respondents prior to participation in the study.

Results

Table 1.Sociodemographic traits of participants (n=220)

Variable	Frequency (percentage)
Gender	
Male	68 (30.9)
Female	152 (69.1)
Place of work	
Specialized hospital	58 (26.4)
General hospital	162 (73.6)
years of experience	
< 10 year	132 (60.0)
10 – 15 year	52 (23.6)
> 15 year	36 (16.4)
Area of practice	
Surgery	96 (43.6)
Medicine	122 (55.4)
other	2 (1.00)

As shown in Table 1, 220 nurses participated in the study, 30.9% males and 69.1% females, associated with general hospitals. 73.6 %. About (60%) of the participants had an experience of less than ten years. More than half of the study participants were working in Medicine department (55.4%, n=122).

Table 2. Frequency of interaction (n=220)

Variable	Frequency (percentage)
Frequency of interaction	
Once daily	126 (57.2)

Once a week	41 (18.6)
Never/ rarely	53 (24.1)

A total of (24.1%, n=53) respondents revealed that they never or rarely interact with pharmacists (Table 2) while, of those who interacted, majority of them had an interaction on daily basis (57.2%, n=126).

Table 3. Reasons for Interaction. (n=220)

Variable	Frequency (percentage)
Reasons of interaction	
Drug dosage queries	18 (8.1)
Side effects queries	20 (9.1)
Drug availability queries	63 (28.6)
Drug alternative queries	40 (18.1)
Drug interaction queries	21 (9.5)
Drug availability queries /Drug dosage queries	33 (15)
Drug availability queries / Side effects queries	25 (11.3)

The major reason of interaction reported by most of the nurses was to query drug availability (28.6%, n=63) while only 8.1% (n=18) interacted with pharmacist regarding drug dosage queries.

Table 4. nurses Expectation from Pharmacist. (n=220)

Question	Respondents' Responses*				p value**			
Questionnaire's Items	SA	A	D	SD	Gender	Current Position	Year of Experience	Practice Area
To improve nurses' clinical training in drug related problems	111 (50.4)	100 (45.4)	0 (0)	9 (4.1)	0.001	0.01	0.001	0.002
To optimize the prescriptions through recommendations	90 (41)	110 (50.0)	0 (0)	20 (9.1)	0.004	0.166	0.008	0.002
To assume responsibility for pharmacotherapy outcomes	130 (59.1)	55 (25.0)	16 (7.2)	19 (8.6)	0.007	0.002	0.013	0.173
To collaborate in solving drug related problems	99 (45.0)	72 (32.7)	7 (3.2)	42 (19.1)	0.001	0.210	0.001	0.113
To offer education and counselling about drugs	110 (50.0)	81 (36.8)	7 (3.2)	22 (10.0)	0.053	0.043	0.04	0.02
To improve the skills for inter professional communication.	125 (56.8)	78 (35.4)	7 (3.2)	10 (4.5)	0.321	0.035	0.01	0.001

Nearly half of the nurses (50%, n = 111, P < 0.05) strongly agreed that they expected the pharmacist to play a vital role in enhancing their knowledge in solving medication-related problems (Table 4). Likewise, 45% (n = 99) of participants strongly agreed with the statement that pharmacists should collaborate with nurses to solve medication-related problems and a significant positive relationship was observed between this expectation and years of nursing experience (P < 0.050).

Table 5 Nurses Experience of Pharmacist. (n=220)

Question	Respondents' Responses*				p value**			
Questionnaire's Items	SA	A	D	SD	Gender	Current Position	Year of Experience	Practice Area
Professional expert on drugs	46 (20.9)	138 (62.7)	24 (10.9)	12 (5.5)	0.001	0.003	0.072	0.012
Counsels on the use of drugs	96 (43.6)	107 (48.6)	11 (5.0)	6 (2.7)	0.02	0.005	0.001	0.010
Exclusively Supplies, controls and dispense drugs	118 (53.6)	82 (37.2)	16 (7.3)	4 (1.8)	0.483	0.109	0.002	0.002
Pharmacists are responsible for solving drug related problems of patients	150 (68.1)	50 (22.7)	15 (6.8)	5 (2.2)	0.614	0.001	0.003	0.055
Pharmacists are a reliable source of general drug information	92 (41.8)	104 (47.2)	19 (8.6)	5 (2.2)	0.002	0.399	0.004	0.007
Pharmacists are a reliable source of clinical drug information	98 (44.5)	60 (27.2)	52 (23.6)	10 (4.5)	0.001	0.003	0.001	0.049
willing to take personal responsibility for resolving any drug-related problems they discover	56 (25.4)	141 (64.1)	19 (8.6)	4 (1.8)	0.637	0.001	0.055	0.003
I am willing to in-corporate the pharmacotherapy for the patient with consultation of the pharmacist	84 (38.2)	98 (44.5	17 (7.7)	12 (5.4)	0.001	0.001	0.270	0.005

Nurses (63%, n = 138) agreed that pharmacists are professional drug experts while 21% (n = 46) strongly agreed with this statement. Gender, current position, and practice were significantly associated with this experience (P < 0.050) Table 5. Nurses' experience with pharmacists was not equal as less than half of participants strongly agreed that pharmacists are a reliable source of clinical medication information (45%), n = 98 , p < 0.050).

Discussion

Collaboration between pharmacists, nurses, and other health care professionals is of great importance in any health care environment. Coordination between doctors, nurses, pharmacists, and other health care professionals must occur around the clock within hospitals and other health institutions, and without good communication between specialists. In healthcare, comprehensive and effective patient care is difficult to achieve [13,14]. According to Baggs and Schmidt et al. Cooperation is the coordination of individual actions, co-planning and working together, sharing goals, planning, problem-solving, decision-making and responsibility [15]. In our current study, more than half of the participants (57%) responded that they interacted with the pharmacist on a daily basis and the main reason for the interaction was to inquire about medication availability and medication alternatives (29% and 18%). This finding shows that nurses' knowledge of the role of pharmacist is very limited as they only consider pharmacist as the person who only knows the brand and generic names of medicines. This indicates that the role of the pharmacist is not yet fully recognized by healthcare teams in Pakistan as evidenced by the results of this study. This finding is also consistent with the study that evaluated the nurse's perception of the pharmacist in a public sector hospital in Pakistan [16]. However, nurses expect pharmacists to be experts in the medication-related field, with nearly half (50%) of participants in the current study strongly agreeing with this statement. However, their expectations conflict with their experience, as only 21% of participants strongly agreed that the pharmacist is a professional medicine expert. A possible reason for these contraindications could include a lack of opportunities for pharmacists to demonstrate their expertise to other healthcare professionals in drug-related fields. Another possible reason is that the healthcare system in Pakistan does not allow pharmacists to fulfill their clinical responsibilities in the hospital, which makes nurses reluctant to accept the pharmacist as a professional drug expert. This argument is supported by the study of Azhar et al., which revealed that 85% and 56% of hospital pharmacists limited their role to maintaining the pharmacy record and dispensing medication only, respectively.

Nurses' experience with the pharmacist regarding providing clinical medication information was below par with 28% of participants disagreeing or strongly disagreeing. This result is also consistent with their expectations as most of them expected the pharmacist to be involved in improving prescriptions through recommendations. These findings are also supported by the Hughes and Laban study [17]. where nurses were open to accepting pharmacist intervention in nursing homes. Interestingly, only 25% of participants strongly agreed that pharmacists have personal responsibility for resolving any medication-related problems. This again shows that the clinical knowledge of the pharmacist is very weak and that pharmacists lack the necessary confidence to make decisions at the patient's bedside thus avoiding taking responsibilities.

In general, the nurse's expectations about the pharmacist do not match their experience. Hence, there is a need for pharmacists to enhance their clinical expertise and redefine their role in the healthcare setting in Pakistan. At the same time, policy makers and other health authorities must also intervene to highlight the importance of the role of the pharmacist and enhance pharmaceutical care services in Saudi Arabia.

Conclusions

Physicians and nurses have positive perceptions of the role of the pharmacist, but recognize that the role of the pharmacist needs to be defined and recognized for effective integration into healthcare teams. Most participants expressed appreciation for the proactive participation and recommendations suggested by pharmacists and indicated that their participation enhanced the safety and quality of patient care.

References

1. Hobson RJ, Scott J, Sutton J. Pharmacists and nurses as independent prescribers: exploring the patient's perspective. Fam Pract 2010 Feb;27(1):110-120.
2. Azhar S, Hassali MA, Ibrahim MM. Perceptions of Hospital Pharmacist's Role in Pakistan's Healthcare System: A Cross-Sectional Survey. Trop J Pharm Res 2011;10:11-17.
3. Reeves S, Lewin S. Interprofessional collaboration in the hospital: strategies and meanings. J Health Serv Res Policy 2004 Oct;9(4):218-225.
4. McDonough R, Doucette W. Developing collaborative working relationships between pharmacists and physicians. J Am Pharm Assoc 2001;41:682-692.
5. Irons BK, Lenz RJ, Anderson SL, Wharton BL, Habeger B, Anderson HG Jr. A retrospective cohort analysis of the clinical effectiveness of a physician-pharmacist collaborative drug therapy management diabetes clinic. Pharmacotherapy 2002 Oct;22(10):1294-1300.
6. Kiel PJ, McCord AD. Pharmacist impact on clinical outcomes in a diabetes disease management program via collaborative practice. Ann Pharmacother 2005 Nov;39(11):1828-1832.
7. Awalom M. T., Kidane M. E., Abraha B. W. (2013). Physicians' views on the professional roles of pharmacists in patient care in Eritrea. International Journal of Clinical Pharmacy, 35(5), 841–846. doi:10.1007/s11096-013-9820.
8. Jin X., Azhar S., Murtaza G., Xue F., Mumtaz A., Niu H., … Zhang Y. (2014). Quantitative study evaluating perception of general public towards role of pharmacist in health care system of Pakistan. Acta Poloniae Pharmaceutica—Drug Research, 71(5), 869–875.
9. American College of Clinical Pharmacy, & Key. (2008). The definition of clinical pharmacy. Pharmacotherapy, 28(6), 816–817. doi:10.1592/phco.28.6.816.
10. Ahmed Alomi Y. (2015). National Pharmacy Practice Programs at Ministry of Health in Saudi Arabia. Journal of Pharma & Pharmaceutical Sciences, 1(2), 17–18. doi:10.24218/vjpps.2015.10
11. Tahaineh L. M., Wazaify M., Albsoul-Younes A., Khader Y., Zaidan M. (2009). Perceptions, experiences, and expectations of physicians in hospital settings in Jordan regarding the role of the pharmacist. Research in Social and Administrative Pharmacy, 5(1), 63–70. doi:10.1016/j.sapharm.2008.05.003.
12. Matowe L, Abahussain EA, Al-Saffar N, Bihzad SM, Al-Foraih A, Al-Kandery AA. Physicians' perceptions and expectations of pharmacists' professional duties in government hospitals in Kuwait. Med Princ Pract 2006;15(3):185-189.
13. Rose L. Interprofessional collaboration in the ICU: how to define? Nurs Crit Care 2011. Jan-Feb;16(1):5-10 10.1111/j.1478-5153.2010.00398.x
14. Fewster-Thuente L, Velsor-Friedrich B. Interdisciplinary collaboration for healthcare professionals. Nurs Adm Q 2008. Jan-Mar;32(1):40-48 10.1097/01.NAQ.0000305946.31193.61.
15. Baggs JG, Schmitt MH. Collaboration between nurses and physicians. Image J Nurs Sch 1988;20(3):145-149 10.1111/j.1547-5069.1988.tb00055.x
16. Azhar S, Hassali MA, Izham MI, Khan TM. A Qualitative Evaluation of Nurses' Perception towards the Role of Pharmacist in Healthcare Setup in Pakistan. Health Med 2010;4:71-76
17. Rose L. Interprofessional collaboration in the ICU: how to define? Nurs Crit Care 2011. Jan-Feb;16(1):5-10 10.1111/j.1478-5153.2010.00398.