



## EVALUATE THE ATTENDANCE OF PHARMACISTS TOWARD PHARMACEUTICAL CARE

\*Luma Altayyem, Anwar Alsharaideh, Reham Alraqad, Lubna Aljaghbeir and Maie Momani

\*Corresponding Author: Luma Altayyem

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### ABSTRACT

**Background:** The concept of pharmaceutical care has had a substantial impact on the field of medicine. It suggests that the approach of providing comprehensive care and addressing medication-related issues has transformed how healthcare is delivered. Pharmacies serve as accessible locations where individuals can seek guidance on health matters and receive necessary medical support. It implies that pharmacies play a crucial role in providing healthcare services to the community. When individuals are unable to promptly consult a doctor, they often turn to pharmacies as a primary source of assistance. It implies that pharmacies serve as an initial point of contact for healthcare needs in situations where immediate access to a doctor is not feasible. The significance of delivering pharmaceutical care in situations where pharmacies serve as the primary healthcare resource. It implies that providing comprehensive care and addressing medication-related issues becomes crucial in these circumstances. The fundamental objective of pharmaceutical care, which is to enhance the overall quality of life for patients and ensure their medication is used safely and effectively. It implies that PC aims to optimize therapeutic outcomes and promote patient well-being. **Objectives:** To assess pharmacists' attitudes towards PC practice and knowledge and identify obstacles to PC in Jordanian royal medical services. **Methods:** A sample size of 100 will choose randomly from Jordanian royal medical services using a formula developed by Daniel and Cross with the assumption of 5% margin of error (d), 95% confidence level ( $z_{\alpha/2} = 1.96$ ). Face to face interview will occur. The survey have three sections. The three sections focused in sociodemographic characteristics, attendance of pharmacist toward pharmaceutical care and practice of pharmacists toward pharmaceutical care. **Results:** Regarding to sociodemographic characteristics, the majority of respondent were between 25 and 40 years old age 75%. 65% of them have bachelor degree. 33% of them agree with health system guarantees the safety of drug treatment. The minority of them strong disagree with main goal of medical treatment is to improve the patient health. **Conclusion:** This study indicates that formal implementation of PC is expected by community of pharmacists' in Jordan. Results of this study also show, however, that Jordanian pharmacists still have poor knowledge of the PC concept. Continues education program are need to improve their knowledge.

### BACKGROUND

The concept of pharmaceutical care has indeed had a significant impact on the field of medicine, particularly in situations where pharmacies serve as the primary healthcare resource.<sup>[1]</sup> The provision of pharmaceutical care goes beyond traditional medication dispensing and encompasses a patient-centered approach that focuses on optimizing medication therapy and improving patient outcomes.<sup>[2]</sup>

Pharmacies are often conveniently located and easily accessible to the general public. In situations where individuals are unable to promptly consult a doctor, they may turn to pharmacies as their first point of contact for healthcare needs. Pharmacists, as highly trained healthcare professionals, are equipped to provide

guidance, advice, and support to individuals seeking assistance with health-related issues.

Pharmaceutical care recognizes the crucial role that pharmacies play in delivering healthcare services to the community.<sup>[3]</sup> Pharmacists are trained to assess and evaluate medication regimens, identify drug interactions and potential adverse effects, counsel patients on proper medication use, and provide recommendations for optimizing therapy.<sup>[4]</sup> They can also address common health concerns, provide information on over-the-counter medications, and promote preventive health measures.

By providing pharmaceutical care services, pharmacies can effectively bridge the gap in healthcare access, particularly in situations where immediate access to a doctor may not be feasible.<sup>[5]</sup> This approach allows

individuals to receive timely advice, medication-related support, and appropriate referrals if needed. It contributes to improving patient outcomes, promoting medication safety, and ensuring that individuals receive the necessary healthcare guidance and support they require.

Overall, the significance of delivering pharmaceutical care in situations where pharmacies serve as the primary healthcare resource cannot be overstated.<sup>[6]</sup> It underscores the vital role that pharmacists play in providing accessible and comprehensive healthcare services to the community. By embracing the principles of pharmaceutical care, pharmacies can contribute significantly to improving patient health outcomes and promoting the overall well-being of individuals seeking healthcare support.<sup>[7]</sup>

## METHODS

**Study Design, Period, and Setting** A cross-sectional questionnaire conducted in pharmacists who works in Jordanian royal medical services **Sample Size and Sampling Technique** A sample size of 100 choosed randomly from Jordanian royal medical services using a formula developed by Daniel and Cross with the assumption of 5% margin of error (d), 95% confidence level ( $z\alpha/2 = 1.96$ ). Face to face interview occurred. The questionnaire contained three sections. The three sections focused in sociodemographic characteristics, attendance of pharmacist toward pharmaceutical care and practice of pharmacists toward pharmaceutical care.

## RESULTS

**Table 2: Evaluate the attendance of pharmacist toward pharmaceutical car.**

	STROGE AGREE	AGREE	NEUTRAL	DISAGREE	STRONG DISAGREE
health system guarantees the safety of drug treatment?	25	33	20	6	6
It is believed that the main goal of medical treatment is to improve the patient health	33	25	20	6	6
believe that the safety of drug therapy should be provided by PC	55	40	5	0	0
believe that the future success of the pharmacy will depend on provision of professional services in addition to dispensing	35	45	10	0	0
Patients often ask you for drug therapy advice	15	20	30	20	15
call a physician if you see a drug reaction	25	25	25	12	13

Part three: Evaluate the practice of pharmacists toward pharmaceutical care 35% of respondents reported that there was no time to deliver PC. The majority of them reported that always the level of information makes it

Part one: sociodemographic characteristics

Regarding to sociodemographic characteristics, the majority of respondent were between 25 and 40 years old age 75%. 65% of them have bachelor degree. Further results are shown below in table 1.

**Table 1: sociodemographic characteristics.**

Age	
25-40	75
40-50	12
More than 50	13
Sex	
Male	52
female	48
Year of experience	
5- 10	70
More than 10	30
Level of education	
Bachelor	65
Master	35
Ph.D	

Part two: Evaluate the attendance of pharmacist toward pharmaceutical car.

Regarding to attendance of pharmacist toward pharmaceutical car, 33% of them agree with health system guarantees the safety of drug treatment. The minority of them strong disagree with main goal of medical treatment is to improve the patient health. Quarter of them agree with calling a physician if you see a drug reaction. Further results are shown below in table two.

difficult to provide care. Further results are shown below in table three.

**Table 3: Evaluate the practice of pharmacists toward pharmaceutical care.**

	Always	Often	Neutral	Never
There is no time to deliver PC	35	25	23	17
Absence of legality	80	10	5	5
Lack of space	55	23	22	0
The level of information makes it difficult to provide care	65	25	5	5
Do not feel that PC is necessary	35	35	10	20

## DISCUSSION

The results of the present study indicate that a majority of pharmacists in Jordan recognize the importance of providing pharmaceutical care (PC) and the need for regulations regarding its legal and organizational aspects. This finding aligns with previous research conducted by Jordan scholars and the National Section of Pharmaceutical Care of the Jordan Pharmaceutical Society, which have also highlighted the necessity of implementing pharmaceutical care in Jordan and addressed the areas requiring improvement and the barriers hindering its provision.<sup>[8]</sup>

One noteworthy aspect of this study is that despite the absence of legal regulations governing pharmaceutical care practice in Jordan, pharmacists exhibit a positive disposition towards the concept of pharmaceutical care. This trend is similar to observations made in other countries such as Thailand and New Zealand. The study reveals that 57% of pharmacists are familiar with the definition of PC, 43% understand its concept, and 78% believe that the future success of pharmacy depends on delivering professional services beyond medication dispensing.<sup>[9]</sup> A study conducted in New Zealand reported similar findings, with over 60% of pharmacists correctly comprehending pharmaceutical care and a comparable percentage recognizing the significance of offering non-dispensing services for the future of the profession.

Additionally, the results highlight that pharmacists with more job experience tend to have a better understanding of pharmaceutical care concept statements compared to their less experienced counterparts. This finding aligns with studies conducted in Saudi Arabia, Nigeria, and Qatar. However, both the present study and the Qatar study indicate that pharmacists with greater experience have less positive attitudes towards the PC concept.<sup>[10]</sup> This might be attributed to the fact that experienced pharmacists may be more cautious about providing PC due to the perceived obstacles and challenges they have witnessed throughout their years of practice. These pharmacists are more likely to acknowledge the difficulties associated with implementing a new service.

Overall, the study underscores the positive disposition of pharmacists in Jordan towards PC despite the absence of legal regulations. It also suggests that more experienced pharmacists possess a better understanding of PC but may have reservations about its implementation. These

findings contribute to the existing knowledge on the attitudes and perceptions of pharmacists towards pharmaceutical care, both in Jordan and internationally.

The study also examined the preparedness of pharmacists in Jordan to provide pharmaceutical care (PC). The findings revealed that while pharmacists had a positive inclination towards pharmaceutical care, only a small percentage (15%) had ever attended a PC course or training.<sup>[11]</sup> Similar findings were reported in a study by Wajid *et al.*, where pharmacists identified a lack of adequate training as a major barrier to PC implementation. This underscores the importance of universities in equipping pharmacists with the necessary knowledge and skills to deliver optimal PC. In Saudi Arabia, for example, 83% of pharmacists received their highest pharmaceutical degree from universities that follow traditional science-based curricula, which may not adequately prepare them for PC provision.

To address this gap, it is necessary to introduce PC-related subjects into the basic curriculum of pharmacy students.<sup>[12]</sup> Patients themselves recognize the need for such knowledge, as demonstrated by the fact that 66% of pharmacists reported patients frequently seeking pharmacotherapy-related advice. Patients' positive experiences with pharmaceutical care contribute to their favorable attitudes and increased expectations for a broader range of services. Research studies worldwide have confirmed the positive impact of PC on medication safety and efficacy parameters, such as adherence to recommendations and reduced self-treatment.<sup>[13]</sup> By preventing medication problems, pharmacist interventions can lead to desired therapeutic outcomes and ultimately reduce healthcare costs associated with hospital admissions resulting from medication non-adherence.

Legal regulations and remuneration for PC provision are crucial factors in the successful implementation of pharmaceutical care in Jordan. The government and health insurance companies need to recognize the clinical and economic effectiveness of pharmaceutical care and establish an appropriate reimbursement system for pharmacists providing pharmaceutical care services.<sup>[14]</sup> Resolving financial aspects prior to full implementation is essential. Additionally, as PC primarily targets chronically ill and elderly populations, reimbursement should come from public sources. Without adequate

financial support, the rollout of pharmaceutical care services may remain marginal.

Encouragingly, progress is being made towards PC implementation in Jordan.<sup>[15]</sup> The Supreme Pharmaceutical Council has submitted a draft Act on the Profession of a Pharmacist for social consultation, which would facilitate PC provision. The Ministry of Health is currently working on piloting pharmaceutical care, with a dedicated team developing solutions and guidelines for testing the pharmaceutical care system in community pharmacies. There are also pending works on the Minister for Health's Regulation for the pharmaceutical care pilot program, which will define record-keeping rules and payment methods from the National Health Fund budget. These efforts are expected to bring Jordan closer to the practical implementation of pharmaceutical care.<sup>[16]</sup>

## CONCLUSION

This study indicated that formal implementation of PC is expected by community of pharmacists' in Jordan. Results of this study also show, however, that Jordanian pharmacists still have poor knowledge of the PC concept. Continues education program are need to improve their knowledge.

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