Community Pharmacist Knowledge, Attitude, and Practice Toward Pharmaceutical Care in Eastern Nepal

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Abstract

Background: Pharmaceutical care (PC) services play a crucial role in optimizing patients' drug therapy and improving treatment outcomes. This study aimed to assess community pharmacists' awareness, attitude, and practice toward PC in eastern Nepal.

Methods: A prospective cross-sectional study was conducted among registered pharmacists practicing community pharmacy in the Morang district, eastern Nepal, from February 2023 to July 2023. A self-administered 24-item structured questionnaire was used to assess participants' knowledge, attitude, and practice (KAP) toward PC. The participants' KAP was classified into good (≥80%), moderate (60-79%), and poor (<60%) levels, respectively, using Bloom's cut-off score points. The chi-square test and Spearman's correlation test were employed to assess the association between the dependent and independent variables.

Results: A total of 193 community pharmacists participated in this study; among them, most were male (73.1%) and under 30 years old (58.5%). Most participants (90.7%) had certificate-level pharmacy qualifications. The majority of the community pharmacists possessed good knowledge (65.3%) and attitude (47.7%) toward PC; however, their practice of PC services was poor (51.3%). The participants' age group and qualifications were significantly linked to a good understanding of PC, while gender was associated with better PC practices ($p < 0.05$).

Conclusion: The study revealed that nearly two-thirds of the community pharmacists had adequate knowledge about PC, but their attitude and practice toward PC were suboptimal. Strict regulatory enforcement of PC-centered pharmacy practice, as well as PC practice-dedicated educational and interventional programs, are recommended for community pharmacy practitioners in this area.

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Introduction

Pharmacy service has been in practice for decades. In recent years, pharmacists have expanded their roles from traditional product-oriented dispensing to patient-focused pharmaceutical care practice (1). Pharmaceutical care (PC) involves assessing medication therapy, educating patients, and ensuring the safe and effective use of drugs. According to Hepler and Strand, "Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life" (2). The American Pharmacists Association developed five principles for PC practice to ensure positive patient outcomes. These five principles include patient data collection, medical information evaluation, formulating a drug therapy plan, implementing the plan, and monitoring and modifying the plan (3).

Globally, pharmacists have disclosed varying knowledge, attitudes, and practices toward PC. For example, studies

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conducted in Jamaica and Ethiopia have shown good knowledge and attitude toward PC, but its implementation in practice was found to be poor (4, 5). Similarly, poor attitudes toward PC were also found in Nigeria, Ethiopia, and India (5-7). In South Asian and Southeast Asian countries, there is an uneven understanding and implementation of PC (8). In Malaysia, pharmaceutical services have evolved from being solely focused on supply to ensuring the quality use of medication, whereas in Thailand, pharmacists perform medication reconciliation, provide patient education, and manage other medication-related problems. In contrast, in Indonesia, PC and clinical pharmacy are relatively new approaches (9-11).

In Nepal, although the pharmacy profession is emerging day by day, PC services have not been effectively established in hospitals and community pharmacies (12). Around 400–500 new pharmacists are registered each year with the Nepal Pharmacy Council (NPC) (13). To optimize pharmacy practice standards, the NPC has promulgated National Good Pharmacy Practice guidelines, which focus on the need for trained manpower, proper facilities, and several other requirements for providing PC services in Nepal (14). However, the pharmacist knowledge-practice gap, the absence of well-established training centers, and the lack of drug information resources in pharmacies and professional development facilities have been found to pose significant barriers to implementing National Good Pharmacy Practice guidelines and the practice of PC services in Nepal (12, 15, 16). Furthermore, there is scarce evidence reflecting the position of PC services among community pharmacies in eastern Nepal. Therefore, the current study aimed to assess community pharmacists' knowledge, attitude, and practice (KAP) regarding PC services in the Morang district of eastern Nepal.

Methods

The prospective cross-sectional study design was carried out on registered pharmacists working in community pharmacies in the Morang district of eastern Nepal from April 2023 to July 2023. Ethical approval was taken from the Institutional Review Committee of Purbanchal University School of Health Sciences, Gothgaun (Ref No 12-080/81). Participants were informed about the study, and written informed consent was obtained before collecting the responses.

Morang is an outer Terai district located in Koshi Province, Nepal, with a total area of 1,855 sq. km (716 sq. mi). It has one metropolitan city (Biratnagar), eight municipalities, and eight rural municipalities (17). Pharmacists, irrespective of age and gender, and those practicing in retail or community pharmacies were included in the study, whereas professionals working in community pharmacies without formal pharmacy education or registration with the professional council, pharmacists working in hospital pharmacies or other clinical settings, and those who refused to participate or did not provide written informed consent were excluded. In this study, "pharmacist" refers to individuals with graduate-level pharmacy qualifications or certificate-level pharmacy education who hold a registration license for professional practice from the NPC.

A total of 682 registered community pharmacies operate in the Morang district, according to the regional office of the Department of Drug Administration in eastern Nepal (18). Thus, a sample size of 193 was calculated using the Raosoft sample size calculator (Raosoft, Inc.), assuming a 90% confidence interval, a 5% margin of error, and a 50% response rate (19). The list of 682 pharmacies operating in the study district was retrieved from the Department of Drug Administration website (https://dams.dda.gov.np/), arranged alphabetically in an Excel sheet, and assigned serial numbers ranging from 1 to 682. Following this, a computer-generated random number list was used as a randomization technique to select 193 study pharmacies.

A self-administered 24-item questionnaire developed by the research team, referencing previous studies (4, 5, 12, 20-24), was used as a data collection tool. The questionnaire was structured into four different sections as follows: Section One contains demographic characteristics; Section Two consists of ten questions to assess knowledge of PC; Section Three comprises six questions to determine attitude toward PC; and Section Four consists of eight questions for assessing PC practice.

Three senior pharmacists, each working in academic, regulatory, and community pharmacy settings, performed the questionnaire's content validation to ensure its accuracy and appropriateness. The content validity ratio of each 24-item question ranged from 0.33 to 1, and the overall content validity index was 0.88. The questionnaire was then translated into the Nepali language by a bilingual language expert and back-translated by another bilingual expert to ensure the accuracy of the translation. It was then face-validated among ten community pharmacists to ensure the clarity of the content. The feedback of respondents was assessed for any ambiguity and modified accordingly to develop the final questionnaire.

The knowledge assessment questions were presented as "yes," "no," and "I don't know," whereas attitude and practice scores were presented on a three-level Likert scale as "agree, neutral, disagree" and "always,

sometimes, never." In this study, the overall reliability and Cronbach's alpha value for the 24-item KAP questionnaire was found to be 0.79.

Ethical approval was obtained from the Institutional Review Committee of Purbanchal University School of Health Sciences, Gothgaun (Ref No. 12-080/81) for the study. During data collection, an investigator approached community pharmacies that were open during the study visit to explain the objectives and purpose of the study and requested the pharmacist's voluntary participation. One participant was selected from each participating community pharmacy. In cases where more than one pharmacist was present in the pharmacy, preference was given based on pharmacist seniority in qualification or experience through inquiry prior to enrollment in the survey. Pharmacists who agreed to participate were provided with an informed consent form to obtain written consent before data collection. In instances where the designated pharmacy was closed or the pharmacist did not consent to participate, a survey was conducted in the nearest available pharmacy instead.

For statistical analysis, the collected data was first coded and entered into MS Excel and then analyzed using SPSS Statistics (Version 17.0). For knowledge, each correct answer response was assigned a score of '1,' and an incorrect answer was assigned a score of '0.' Thus, for knowledge, the maximum attainable score was 10, and the minimum score was 0. Similarly, scores of 0, 1, and 2 were assigned to each negative, neutral, and positive attitude-related answer, respectively, and to "never," "sometimes," and "always" responses for practice-related questions. Therefore, for the 6-item attitude category, the maximum score was 12, and for the 8-item practice category, the maximum score was 16, whereas the minimum score was 0 for both attitude and practice.

The original Bloom's cut-off points—80.0-100%, 60.0-79.0%, and ≤59% of the total score—were adapted to categorize good, moderate, and poor KAP scores, respectively (25). Descriptive analyses were performed, where categorical data were presented in percentages and frequencies, and continuous variables were analyzed using means. The association between socio-demographic factors and KAP was analyzed using bivariate analysis, i.e., the chi-square test and correlation coefficient (Spearman's Rho value). A confidence interval of 95% and a p-value <0.05 were considered significant.

Results

A total of 193 registered community pharmacists participated in this study, of whom the majority, 113 (58.5%), were aged under 30 years. The mean age of the participants was 31.09 (±7.269) years. Out of the 193 respondents, 141 (73.1%) were male. Most of the participants, 175 (90.7%), were assistant pharmacists with a certificate-level pharmacy qualification. A total of 76 (39.4%) respondents reported having 1–3 years of experience in community pharmacy practice, as shown in Table 1.

Table 1. Demographic Characteristics of Participants

Study variables	Frequency (%)
Age (in years)	
≤ 30 years	113 (58.5)
>30 years	80 (41.5)
Gender	
Male	141 (73.1)
Female	52 (26.9)
Qualification	
Certificate-level pharmacy education	175 (90.7)
Pharmacy graduate and above	18 (9.3)
Work experience	
< 1 year	14 (7.3)
1-3 years	76 (39.4)
3-5 years	38 (19.7)
>5 years	65 (33.7)

Most pharmacists, 126 (65.3%), had good knowledge of PC. Similarly, about 91 (47.2%) pharmacists showed good attitudes toward PC, whereas 99 (51.3%) of the participants had poor practices in PC services in their pharmacy, as shown in Figure 1.

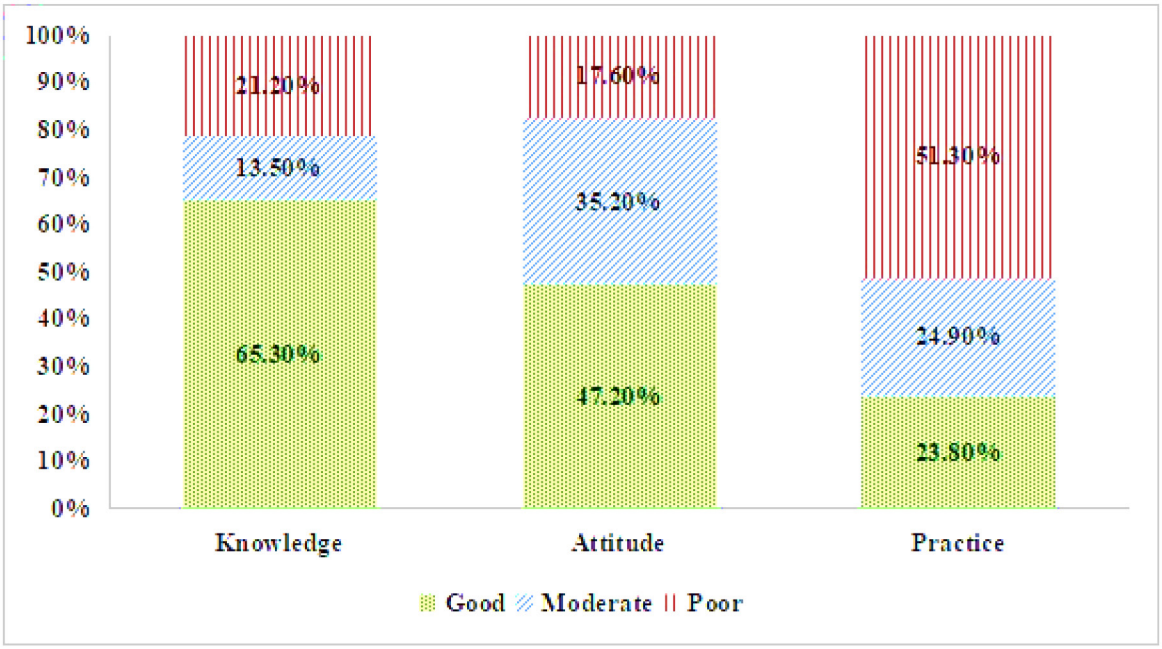

Figure 1. Distribution of Knowledge, Attitude and Practice towards PC among community pharmacists (N=193)

In terms of knowledge, most pharmacists, 178 (92.2%), agree that PC is patient-oriented pharmacy services and must be provided by all pharmacists, 173 (89.6%), and more than 80% were aware that PC optimizes medication therapy, minimizes medication-related difficulties, aids in illness management, and supports rational drug use to improve patient outcomes. A total of 146 (75.6%) community pharmacists think that they should create a drug therapy plan for patients to meet their therapeutic goals and are aware that PC services promote health and prevent disease. However, only 112 (58.0%) pharmacists perceive drug information and patient counseling as necessary components of PC services, and about half, 99 (51.3%), think that documentation of PC is a vital element of PC, as shown in Table 2.

Table 2. Community pharmacists' response to PC knowledge-related questions

Knowledge questions	Correct response (%)
PC is a patient-oriented care service.	178 (92.2)
The primary focus of PC in the health care system is identifying and meeting patient's drug-related needs.	165 (85.5)
PC is the pharmacist's responsibility for the optimization of medication therapy and management.	161 (83.4)
PC minimizes medication-related problems and aids in disease management.	164 (85.0)
PC services promote rational drug therapy and improve patient's drug therapy outcomes.	155 (80.3)
Pharmacists should develop a medication therapy plan for the patient's medical condition to achieve the desired therapeutic goals.	146 (75.6)
Health promotion and disease prevention are integral outcomes of PC services.	150 (77.7)
PC necessitates the drug information and counseling services for the patient during the drug therapy plan.	112 (58.0)
Documentation of the care provided is a vital element of the PC practice.	99 (51.3)
PC must be provided by all pharmacists to improve patient's quality of life.	173 (89.6)

Regarding attitudes toward PC, 167 (86.5%) agreed that PC contributes a valuable mode of practice for improving patient health needs, 138 (71.5%) considered providing PC as the primary responsibility of community pharmacists, and 165 (85.5%) wanted to perform PC as pharmacist practitioners. Additionally, 162 (83.9%) respondents regarded PC as valuable. However, 87 (45.1%) community pharmacists felt that PC practice is extremely resource-intensive, time-consuming, and required more manpower, while only 45 (23.3%) felt that PC is not beneficial compared to the additional workload it places on pharmacists. Detailed information is depicted in Table 3.

Table 3. Attitude towards pharmaceutical care among community pharmacists

Attitude Questions	Agree (%)	Neutral (%)	Disagree (%)
PC is a valuable mode of practice and will serve to improve patient health needs.	167 (86.5)	21(10.9)	5 (2.6)
The primary responsibility of pharmacists in general and community pharmacists is to provide pharmaceutical care.	138 (71.5)	39 (20.2)	16 (8.3)
As a pharmacist practitioner, I would like to perform pharmaceutical care.	165 (85.5)	24 (12.4)	4 (2.1)
The practice of Pharmaceutical care is valuable?	162 (83.9)	26 (13.5)	5 (2.6)
Practicing Pharmaceutical care is too resource-intensive, time-consuming, and requires more manpower.	87 (45.1)	59 (30.6)	47 (24.4)
Providing Pharmaceutical care is not beneficial when compared with the additional workload that it places on pharmacists.	45 (23.3)	54 (28.0)	94 (48.7)

In terms of practice, only 63 (32.6%) participants considered keeping a patient medical record, and 46 (23.8%) community pharmacists reported monitoring adverse drug reactions, while 114 (59.1%) practiced counseling patients on drug use and adverse effects. In addition, only a minority of the pharmacists, 34 (17.6%), agreed that they worked to resolve drug-related issues through consistent communication with doctors. Similarly, only 52 (26.9%) community pharmacists took into account the patient's physical, socio-economic, and emotional condition during PC, and 56 (29%) stated they always monitored patient treatment progress to ensure that therapeutic goals were met. On the other hand, 100 (51.8%) of all community pharmacists reported managing time for patients, even when they were busy, as shown in Table 4.

Table 4. Practice of Pharmaceutical care among community pharmacists

Practice Questions	Always (%)	Sometimes (%)	Never (%)
Do you create medical records for patients?	63 (32.6)	113 (58.5)	17 (8.8)
Do you counsel the patient about drug use and ADRs related to drugs?	114 (59.1)	61 (31.6)	18 (9.3)
Do you monitor Adverse Drug Reactions?	46 (23.8)	93 (48.2)	54 (28.0)
Do you intervene when a patient has not achieved set goals?	51 (26.4)	102 (52.8)	40 (20.7)
Have you ever resolved drug-related problems (DRPs) of the patient (e.g. referring the patient to a doctor or communicating with the doctor to resolve identified DRPs)?	34 (17.6)	135 (69.9)	24 (12.4)
Do you consider the patient's physical, socio-economic, and emotional condition while providing pharmaceutical care?	52 (26.9)	103 (53.4)	38 (19.7)
Have you monitored the patient's treatment progress to ensure the achievement of therapeutic goals?	56 (29.0)	107 (55.4)	30 (15.5)
Do you provide enough time for the patient even during a rush in the pharmacy?	100 (51.8)	68 (35.2)	25 (13.0)

In this study, a statistically significant relationship between knowledge and age ($p = 0.034$) and qualification ($p = 0.003$) was observed; the age group ≤30 years showed better knowledge than the age group over 30 years. The relationship between attitude and demographic characteristics such as age, gender, qualification, and experience was found to be statistically non-significant. However, the practice score showed an association only with gender ($p = 0.020$), indicating better practice by males than females. In contrast, practice was not statistically significant in terms of age ($p = 0.619$), qualification ($p = 0.097$), and experience ($p = 0.748$) (Table 5).

Table 5. Association of socio-demographic characteristics with KAP

Characteristics	Knowledge (%)			p-value	Attitude (%)			p-value	Practice (%)			p-value
	Poor	Moderate	Good		Poor	Moderate	Good		Poor	Moderate	Good	
Age												
≤ 30 years	17	18	78		21	39	53		56	31	26	
	(15.0)	(15.9)	(69.0)		(18.6)	(34.5)	(46.9)		(49.6)	(27.4)	(23.0)	
				0.034*				0.910				0.619
>30 years	24	8	48		13	29	38		43	17	20	
	(30)	(10)	(60)		(16.3)	(36.3)	(47.5)		(53.7)	(21.3)	(25)	
Gender												
Male	31	17	93		25	47	69		75	28	38	
	(21.9)	(12.1)	(65.9)	0.622	(17.7)	(33.3)	(48.9)	0.640	(53.2)	(19.9)	(26.9)	0.020*
Female	10	9	33		9	21	22		24	20	8	
	(19.2)	(17.3)	(63.4)		(17.3)	(40.4)	(42.3)		(46.2)	(38.5)	(15.3)	
Qualification												
Certificate pharmacy	41	25	109		32	62	81		92	45	38	
	(23.4)	(14.2)	(62.2)		(18.3)	(35.4)	(46.3)		(52.6)	(25.7)	(21.7)	
				0.003*				0.672				0.097
Pharmacy graduate or above	0	1	17		2	6	10		7	3	8	
	(0)	(5.6)	(94.4)		(11.1)	(33.3)	(55.6)		(38.9)	(16.7)	(44.4)	
Experience												
Less than 1 year	1	3	10		3	7	4		5	6	3	
	(7.1)	(21.4)	(71.4)		(21.4)	(50)	(28.6)		(35.7)	(42.8)	(21.4)	
1-3 years	13	10	53		12	26	38		41	18	17	
	(17.1)	(13.1)	(69.7)	0.397	(15.8)	(34.2)	(50)	0.504	(53.9)	(23.7)	(22.4)	
	12	3	23		9	15	14		18	9	11	0.748
3-5 years	(31.5)	(7.9)	(60.5)		(23.7)	(39.5)	(36.8)		(47.4)	(23.7)	(28.9)	
	15	10	40		10	20	35		35	15	15	
More than 5 years	(23.1)	(15.4)	(61.5)		(15.4)	(30.8)	(53.8)		(53.8)	(23.1)	(23.1)	

Note: *Represent statistically significant at P-value <0.05. The P-value is calculated by using the chi-square

Spearman's correlation shows a weak positive association among KAP scores, which was statistically significant ($r(193) = 0.272$, $p < 0.01$; $r(193) = 0.371$, $p < 0.01$; $r(193) = 0.290$, $p < 0.01$), indicating a positive monotonic relationship, as shown in Table 6.

Table 6. Correlation among Knowledge, Attitude, and Practice towards PC

		Knowledge	Attitude	Practice
Knowledge	Spearman's Rho value	1.000	.272**	.371**
	p-value		<0.001	<0.001
Attitude	Spearman's Rho value	.272**	1.000	.290**
	p-value	<0.001		<0.001
Practice	Spearman's Rho value	.371**	.290**	1.000
	p-value	<0.001	<0.001	

**Correlation is significant at the p< 0.001 (2-tailed).

Discussion

This study revealed significant gaps in the KAP of pharmacists regarding PC services in this area. Specifically, 65.3% of pharmacists demonstrated good knowledge, and 47.2% exhibited a positive attitude toward PC, whereas 51.3% showed poor practices in delivering PC services. These results highlight a critical deficiency in the KAP framework for pharmaceutical services in this region. A major contributing factor to these limitations may be the predominance of pharmacists with certificate-level education, as identified in our study, where the curriculum offers minimal training in PC (26).

The study comprised 193 community pharmacists from the Morang district, with a greater percentage of male participants (73.1%) than female participants (26.9%). This is in contrast to the results obtained in Malaysia, Turkey, and Malaysia, where there was a higher proportion of female community pharmacists (9, 27, 28). The variations might be ascribed to cultural norms, educational obstacles, societal expectations, and employment difficulties that impede women, particularly in developing nations, from pursuing professional jobs. Most community pharmacists in our study were aged below 30, possessed certificate-level degrees, and had 1-3 years of professional experience. This is consistent with earlier research conducted in eastern Nepal (14), which shows that young pharmacists with certificate-level qualifications were more engaged in community pharmacy than those with higher-level qualifications. This may be due to the comparatively lower number of licensed pharmacy graduates in the country, and those with higher academic degrees prefer jobs in other areas of professions such as education, academic institutions, hospital pharmacies, and industrial and research sectors.

Our study revealed that most community pharmacists had good knowledge of PC, which is consistent with studies conducted in Turkey, Saudi Arabia, and Jordan (24, 27, 29). However, this contrasts with a survey conducted in Karnataka, India, where pharmacists were found lacking in PC-related knowledge (23). The widespread availability of e-books, online resources, webinars, reference books, conferences, and workshops may have contributed to the adequate knowledge of PC among pharmacists. However, some community pharmacists did not consider counseling, drug information, and documentation as provisions of PC. This aligns with studies conducted in Nigeria, where respondents' understanding of PC and their role in PC services was not entirely satisfactory (6). Achieving PC goals requires adherence to defined principles, including documentation of progress and modifications of therapy according to the patient's clinical needs, which can be shared with relevant healthcare providers (15). Therefore, educating community pharmacists is essential for gaining full acceptance and support for PC implementation.

Overall, the majority of respondents in our study comparatively lacked a positive attitude toward PC, contrasting with findings from Pakistan and Saudi Arabia (20, 24). This may be due to factors such as patient load, lack of economic incentives, and weak government regulations, which influence attitudes toward PC. Despite

this, most pharmacists agreed that PC is a valuable practice that improves patient health, although they also noted that it is resource-intensive, time-consuming, and requires more manpower. Professional training related to good pharmacy practice could orient new pharmacists to develop more positive attitudes toward PC (5). More than 80% of the pharmacists expressed a willingness to provide PC, aligning with a study conducted in Poland, where nearly all pharmacists were willing to implement PC (30).

However, despite having good knowledge, many community pharmacists in the Morang district lacked proper PC practices. Various barriers to PC implementation, such as financial constraints, time limitations, lack of private counseling areas, and low public expectations, have been reported in other studies (31, 32). These barriers may also apply to our study, limiting community pharmacists' engagement in PC practices and collaboration with other healthcare providers. Some community pharmacists in our study reported never creating medical records for patients, monitoring adverse drug reactions, intervening when patients did not achieve set goals, or considering patients' physical, socio-economic, and emotional conditions. This finding is similar to a study conducted in northwest China, where pharmacists performed only some PC services (33). Practical knowledge of PC is essential, and theoretical knowledge alone is insufficient.

Our research identified a significant link between knowledge and age (p=0.034) and knowledge and qualification (p=0.003). Younger and better-educated pharmacists were more knowledgeable, which is consistent with findings in Poland and Jamaica (4, 22). PC is a relatively recent development within pharmacy practice, and younger practitioners are often more open to adopting new philosophies (34). Pharmacists with bachelor-level qualifications or higher have more knowledge than those with diploma-level qualifications due to the more comprehensive and clinically focused curriculum at the undergraduate level.

Similarly, various contexts of structural and process aspects of PC services may affect the proper delivery of PC services. Structural elements emphasize the physical and organizational framework that underpins PC, including infrastructure, equipment accessibility, and personnel. Conversely, process elements scrutinize the provision of treatment, highlighting pharmacists' roles in patient counseling, therapeutic oversight, and coordination with healthcare professionals (35). In our study, although most pharmacists exhibited good knowledge and attitudes, their practice was impeded by systemic obstacles, including time limits, and resource and infrastructure deficiencies for integration into patient-centered activities. A study in Ethiopia identified significant deficiencies in infrastructure, such as insufficient counseling areas and ventilation systems, adversely affecting service delivery (36). These studies highlight the fact that, without sufficient structural support, even competent and willing pharmacists find it challenging to execute effective PC delivery.

This study found a significant link between gender and PC practice (p=0.020), with male participants more likely to practice PC than female participants. This finding aligns with previous research, which has often highlighted the dual responsibilities of women, including managing jobs and family duties, which can limit their ability to provide adequate time to patients. For example, studies conducted in Malaysia and Turkey also noted that female pharmacists faced greater challenges in balancing professional and personal responsibilities, impacting their professional practices (9, 37).

Interestingly, our study revealed no significant relationship between age, qualification, or years of experience and PC practice. This lack of association contrasts with findings from other regions (4, 22). The discrepancy in our findings might be attributed to the specific context of Nepal, where there is a general lack of competency in patient care among community pharmacists. The absence of PC-focused training in academic curricula compounds this issue. Unlike in other countries where PC is integrated into the pharmacy education system, in Nepal, both diploma and bachelor-level programs lack dedicated PC courses, which may explain the overall poor practice of PC among pharmacists regardless of their age, qualification, or experience.

Strengths and limitations

The primary strength of this study is that it offers important insights into pharmacists' perspectives on PC-related services and situations in this area. Secondly, this study identifies gaps and critical areas for improvement to strengthen PC related policy, training, and services in this particular sector. However, there are some limitations. The study was conducted in a single district, which may restrict its generalizability across the country. Similarly, structural components of PC, such as the physical and material aspects of pharmacies, were not evaluated in this study. Furthermore, as a cross-sectional study, it could not evaluate causality between knowledge, attitudes, and practice, nor can it capture temporal changes in respondents' opinions.

Conclusion

In conclusion, most community pharmacists do not incorporate PC into routine practice despite having good knowledge and a positive attitude. Most pharmacists consider time, additional workload, and insufficient resources as barriers to implementing PC services. Educational and training programs directed toward PC practice are recommended in this area to encourage and inspire community pharmacists to fulfill PC practice and services in their community pharmacies.

Conflicts of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article

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