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A Literature Review on Patient Satisfaction with Clinical Pharmacy Services and Influencing Factors

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ABSTRACT

Assessing service quality is crucial for determining how well healthcare services meet patient expectations. This review explores patient satisfaction with clinical pharmacy services and the factors shaping it. A comprehensive search of MEDLINE and EBSCO databases was conducted using the keywords "patient satisfaction," "pharmacy service," "hospital pharmacy service," and "clinical pharmacy service." Studies were included if they were original research, full-text, in English, and published between 2011 and 2021. From 1,118 identified articles, 25 addressed patient satisfaction with clinical pharmacy activities such as counseling, medication therapy management, patient support initiatives, and pharmaceutical care. Findings indicate that patients generally express satisfaction with these services. Satisfaction was most strongly influenced by service quality, convenience, clarity of information, and trust in the pharmacist's expertise. Consequently, pharmacists should enhance their clinical knowledge and competencies to maximize the benefits of their services for patients.

Keywords: Patient support program, Counseling, Pharmaceutical care, Drug therapy monitoring

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Introduction

Patient satisfaction is an important indicator for evaluating whether healthcare services align with patient expectations [1] and can provide insight into the effectiveness of communication between patients and providers [2]. Understanding satisfaction levels helps guide improvements in healthcare programs and overall system performance. Research has shown that patients who are satisfied are more likely to follow medical advice, engage actively in their treatment, adhere to medications, and achieve better health outcomes [3].

Patients require accessible, professional support during their healthcare experience. Pharmacists play a vital role in assisting patients throughout treatment [4] and can participate in public health promotion, which helps build trust and demonstrates their commitment to patient well-being [5]. Clinical pharmacy services are a key part of this support, allowing pharmacists to contribute directly to patient care [3].

These services aim to ensure that drug therapy is rational, safe, accurate, and cost-effective [6]. Patient satisfaction largely depends on how effectively these services meet their expectations and needs [7]. Assessing satisfaction serves as a measure of service quality, helping to monitor and improve patient care [8]. Pharmacists need to identify appropriate opportunities to communicate with patients and respond to their concerns, while strong technical skills and motivation can enhance the effectiveness of care delivery [1, 9].

Evidence suggests that patient satisfaction affects pharmaceutical service outcomes, including treatment adherence, clinical effectiveness, and loyalty to healthcare providers [1]. A 2019 review highlighted factors influencing satisfaction with pharmacy services [10] but did not specifically address clinical pharmacy service types or determinants. This paper therefore aims to provide a detailed overview of patient satisfaction with clinical pharmacy services and the key factors that influence it.

Materials and Methods

Data search

A systematic search of MEDLINE and EBSCO databases was performed between May and June 2021 using the keywords "patient satisfaction," "pharmacy service," "hospital pharmacy service," and "clinical pharmacy service." The search and selection process followed PRISMA guidelines.

Study selection

Eligible studies were original research articles, published in full text, in English, and released from 2011 to 2021. Studies were excluded if they did not focus on clinical pharmacy services or lacked the relevant keywords.

Data extraction

Data collected from the selected studies included author and year, country, participant demographics and sample size, healthcare setting, type of clinical pharmacy service, study design, instruments used to assess satisfaction, factors affecting satisfaction, study outcomes, and funding sources.

Results and Discussion

Figure 1 presents the PRISMA flow diagram summarizing the selection process. The initial search identified 1,118 articles (441 from MEDLINE and 677 from EBSCO). After removing duplicates, 1,094 articles remained, and 1,069 were excluded based on inclusion and exclusion criteria, leaving 25 studies that specifically examined patient satisfaction with clinical pharmacy services.

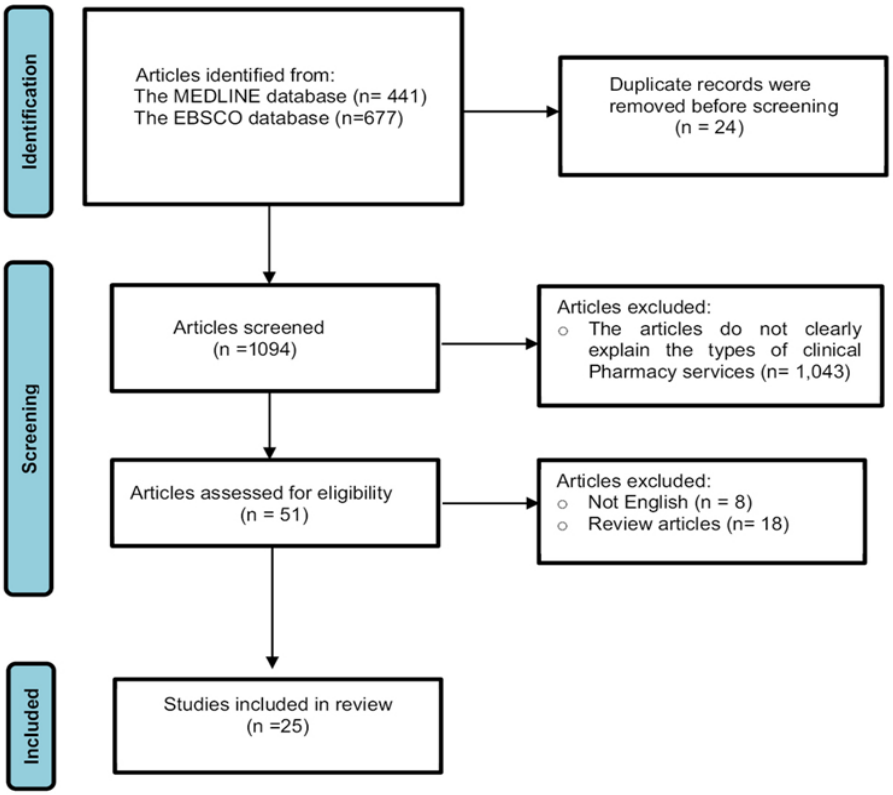

Figure 1. PRISMA flow diagram of the literature search.

Table 1 summarizes 25 studies that explored patient satisfaction with clinical pharmacy services across various countries, including over 41,000 participants from hospitals, primary care centers, community pharmacies, and other pharmacy settings. The types of services evaluated included patient counseling, medication therapy monitoring, patient support programs, and pharmaceutical care. Most studies utilized a cross-sectional design and

collected data through self-administered questionnaires or interviews. A range of instruments was employed to assess satisfaction, such as adapted questionnaires from prior studies, the 8-item Morisky Medication Adherence Scale (MMAS-8), Diabetes Medication Satisfaction (DiabMedSat), Leeds Satisfaction Questionnaire (LSQ), Patient Satisfaction Feedback (PSF), Consumer Assessment of Health Plans Survey (CAHPS), and the PNAUM survey (National Survey on Access, Use, and Promotion of Rational Use of Medicines – Services). These tools evaluated patient satisfaction in areas including pharmacy facilities, clinical pharmacy services, pharmacist performance, communication, and overall pharmaceutical care.

Table 1. List of patient satisfaction articles on clinical pharmacy services

No	Authors, Country, Year	Participants	Number of participants	Service Location	Service Category	Study Design	Measurement Tool
1	Alotaibi NH *et al*., Saudi Arabia, 2021	Patients using outpatient pharmacies in multiple public hospitals	n = 746	Hospitals	Counseling	Cross-sectional study	A 23-item questionnaire assessing satisfaction with pharmacy infrastructure and services, using a 5-point Likert scale
2	Al-Arifi MN, Saudi Arabia, 2012	Individuals visiting community pharmacies	n = 1,699	Community pharmacies	Counseling	Cross-sectional study	An 8-item survey capturing patient opinions and satisfaction regarding pharmacists' roles in community pharmacy practice
3	Alkhoshaiban A, Saudi Arabia, 2019	Patients with type II diabetes	n = 102	Hospitals	Counseling	Comparative longitudinal study	Medication Adherence Scale-8 (MMAS-8) and Diabetes Medication Satisfaction (DiabMedSat) questionnaires
4	Hale A *et al*., Australia, 2015	Individuals scheduled for elective surgical procedures	n = 200	Tertiary hospital	Counseling	Cross-sectional study	Surveys with 12 and 25 Likert-scale items evaluating satisfaction and perspectives on pharmacist–physician collaborative prescribing
5	Iancu ME *et al*., Romania, 2014	Patients, family members, and caregivers receiving pharmacist counseling	n = 3,303	Pharmacies	Counseling	Prospective survey	A 16-item instrument focused on pharmacist counseling during pharmacy visits
6	Munro L *et al*., Canada, 2020	Oncology clinic attendees	n = 35	Hospital	Counseling	Cross-sectional study	Combined surveys and interviews totaling 20 items on perceived value and satisfaction with clinical pharmacy services
7	Hall JJ *et al*., Canada, 2016	Rheumatology clinic patients	n = 62	Hospital	Counseling	Cross-sectional study	Leeds Satisfaction Questionnaire (LSQ) employing a 5-point Likert scale for patient satisfaction assessment
8	Fesharaki F, Iran, 2019	Patients awaiting medication dispensing	n = 326	Pharmacies	Counseling	Cross-sectional study	A 36-item, 5-point Likert scale questionnaire examining pharmacist nonverbal communication and patient satisfaction

9	Alshayban DM *et al*., Saudi Arabia, 2020	Patients with chronic or acute conditions	n = 531	Hospitals	Counseling	Cross-sectional study	Arabic Patient Satisfaction Feedback (PSF) questionnaire evaluating satisfaction and willingness to pay for pharmacist counseling
10	Martin and Faber, United States, 2016	Individuals undergoing Hepatitis C Virus (HCV) therapy	n = 64	Hospital	Drug therapy monitoring	Cross-sectional study	A 20-question satisfaction survey addressing care from providers, including clinical pharmacists, in HCV management
11	Reich CM *et al*., United States, 2018	Patients with psychiatric diagnoses	n = 240	Hospital	Drug therapy monitoring	Cross-sectional study	A 19-item, 5-point scale instrument measuring patient satisfaction
12	Crespo and Tyszka, Canada, 2016	Patients receiving chemotherapy	n = 112	Hospital	Drug therapy monitoring	Cross-sectional study	A 20-item Likert-scale survey assessing satisfaction with clinical pharmacy services
13	Beyene K *et al*., New Zealand, 2020	Warfarin users	n = 305	Pharmacies	Drug therapy monitoring	Cross-sectional study	A 36-item, 5-point Likert scale questionnaire gauging satisfaction with pharmacist-managed anticoagulation services
14	Bezuidenhout *et al*., South Africa, 2014	Patients on antiretroviral therapy	n = 300	Hospital	Drug therapy monitoring	Cross-sectional study	Structured interview questionnaire evaluating satisfaction with facility services, communication, and medication management
15	Chou YC *et al*., Taiwan, 2019	Recipients of medical care	n = 741	Hospital	Drug therapy monitoring	Cross-sectional study	A 5-item tool exploring trust, satisfaction, and collaboration with clinical pharmacists
16	Sites BD *et al*., Lebanon, 2018	Patients with musculoskeletal disorders	n = 19,566	Hospital	Drug therapy monitoring	Cross-sectional study	Consumer Assessment of Health Plans Survey (CAHPS) derived from Medical Expenditure Panel Survey (MEPS) data
17	Hatton J *et al*., United States, 2017	Patients attending in-person or clinical video teleconferencing (CVT) pharmacy clinics	n = 57	Hospital	Patient support program	Cross-sectional study	A 10-item self-administered questionnaire assessing satisfaction with CVT pharmacist consultations
18	Mooney EV *et al*., United States, 2018	Patients receiving long-acting injectable antipsychotics (LAIA)	n = 161	Pharmacies	Patient support program	Prospective survey	A four-section survey evaluating satisfaction with pharmacist-administered LAIAs in community settings
19	Bourdin A *et al*., Switzerland, 2020	Participants in the Fingolimod Patient Support Program (F-PSP)	n = 17	Hospital	Patient support program	Cross-sectional study	Qualitative semistructured face-to-face interviews exploring satisfaction, experiences, and views of the F-PSP
20	Takaki H *et al*., Japan, 2015	Pharmacy visitors receiving prescribed medications	n = 407	Pharmacies	Pharmaceutical care	Cross-sectional study	A four-item questionnaire with five response options measuring overall

							satisfaction with pharmaceutical care
21	Soeiro OM *et al*., Brazil, 2017	Users of primary health care services	n = 8,803	Primary health care facilities	Pharmaceutical care	Cross-sectional study	National Survey on Access, Use and Promotion of Rational Use of Medicines – Services (PNAUM) assessing satisfaction with pharmaceutical care
22	El-Sharif SI *et al*., United Arab Emirates, 2017	Patients with medical or non-medical educational backgrounds	n = 375	Pharmacy	Pharmaceutical care	Cross-sectional study	Adapted questionnaire based on UK Community Pharmacy Patient Questionnaire (PSNC) and Saudi Ministry of Health rural satisfaction surveys
23	Abebe TB *et al*., Ethiopia, 2016	HIV/AIDS patients	n = 291	Hospital	Pharmaceutical care	Cross-sectional study	Structured Likert-scale (1–5) interviews measuring expectations and satisfaction with pharmaceutical care
24	Ali HS *et al*., United Arab Emirates, 2019	All pharmacy attendees	n = 210	Community pharmacies	Pharmaceutical care	Cross-sectional study	A 20-item instrument evaluating perceptions of pharmacist performance and satisfaction with services
25	Mináriková *et al*., Slovakia, 2016	Patients aged ≥40 years	n = 2,844	Community pharmacies	Pharmaceutical care	Cross-sectional study	A 29-item, 5-point Likert scale questionnaire assessing satisfaction with community pharmacy pharmaceutical care
			Total n = 41,494				

Patient satisfaction with counseling services

Table 2 summarizes nine studies examining patient satisfaction with counseling services. Overall, patients reported a high level of satisfaction with clinical pharmacy counseling. In Saudi Arabia, satisfaction levels varied across studies. For instance, Al-Arifi (2012) found that most patients were highly satisfied with pharmacists' professionalism and performance, particularly regarding their role in counseling, supporting patient adherence, and providing accurate medication information. Satisfaction tended to increase with the frequency of counseling sessions. However, certain challenges were noted, including limited privacy during consultations and an insufficient number of trained pharmacists [9].

Table 2. Patient Satisfaction with Counseling Services

Authors	Country	Participants	Factors Influencing Satisfaction	Key Findings	Funding
Alotaibi NH *et al*., 2021	Saudi Arabia	746 patients	Pharmacy service quality, facility conditions	Roughly half of patients expressed dissatisfaction with outpatient pharmacy services; mean satisfaction score was 2.97 ± 0.65 (on a 5-point scale).	Not applicable
Al-Arifi MN, 2012	Saudi Arabia	1,699 patients	Pharmacist counseling on adherence and medication information	Patients reported enhanced satisfaction, positive perceptions, and greater appreciation of pharmacists' contributions to the healthcare team.	Not applicable

Alkhoshaiban A *et al*., 2019	Saudi Arabia	102 patients with type 2 diabetes mellitus (T2DM)	Medication adherence, patient satisfaction among elderly, effect of adherence on HbA1c	The intervention improved adherence, satisfaction levels, and HbA1c values in elderly T2DM patients.	Not applicable
Alshayban DM *et al*., 2020	Saudi Arabia	531 patients with acute or chronic conditions	Service quality, counseling duration, pharmacist expertise	A plurality of patients (43.9%) were satisfied with counseling; average rating was 7.87 ± 1.99 out of 10.	Not applicable
Hale A *et al*., 2015	Australia	200 patients awaiting elective surgery	Satisfaction with collaborative physician consultations and prescribing by pharmacists	The majority of patients reported high satisfaction with pharmacist-led prescribing consultations.	Not applicable
Iancu ME *et al*., 2014	Romania	Patients, family members, and caregivers receiving pharmacist counseling	Education and counseling quality, information on expired medications	Most respondents obtained all required information from pharmacists and expressed the highest level of satisfaction with the interaction.	Not applicable
Munro L *et al*., 2020	Canada	35 oncology clinic patients	Convenience, medication details, pharmacist-patient communication	Patients indicated very high satisfaction, with mean scores ranging from 5.97 to 6.70 out of 7.	Not applicable
Hall JJ *et al*., 2016	Canada	62 rheumatology clinic patients	Overall satisfaction, information provision, empathy, service techniques, competencies, ethics, and communication	Satisfaction was consistently higher in the collaborative care group across all measured domains.	Not applicable
Fesharaki F, 2019	Iran	326 patients	Nonverbal cues (pharmacist tone, body language), wait times, pharmacy environment	In community pharmacies, nonverbal communication significantly correlated with patient satisfaction.	Not applicable

A study in Saudi Arabia reported a relatively low patient satisfaction score of 2.97 ± 0.65 on a 5-point scale [11]. Factors influencing satisfaction included pharmacy facilities, services, and counseling practices. Many patients expressed dissatisfaction with pharmacists' history-taking (3.17 ± 1.60), provision of information on side effects or drug interactions (3.08 ± 1.64), and guidance on storage conditions (3.11 ± 1.63). Contributing factors included a limited number of pharmacists and support staff, heavy workloads, insufficient ongoing training for pharmacy personnel, lower service standards, and inadequate oversight by regional health authorities [11].

In contrast, Alkhoshaiban *et al*. (2019) conducted a study on 102 patients with type II diabetes and found that an intervention program significantly improved medication adherence, patient satisfaction, and HbA1c levels. Improvements in these outcomes were also associated with patient gender, highlighting the important role of pharmacists in overall health management [12].

Hale *et al*. (2016) in Australia reported that among 200 pre-surgical patients, over 97% expressed high satisfaction with pharmacist consultations. These counseling sessions were considered essential for establishing effective patient–pharmacist partnerships and promoting adherence to treatment plans [13].

In Romania, Iancu *et al*. (2014) found similarly high satisfaction levels. Nearly half of the patients (47.65%) spent 5–10 minutes with pharmacists, 95.85% received all necessary information, and 76.51% rated their counseling experience as very satisfactory (5 on a 1–5 scale). Counseling included guidance on drug administration, dosing, food interactions, and treatment duration, which patients reported as professional and comprehensive [14].

A Canadian study in 2021 on 35 patients undergoing anticancer therapy found very high satisfaction with counseling services, with scores ranging from 5.90 to 6.70 out of 7. Satisfaction was influenced by comfort during

counseling, clarity of treatment information, and effective pharmacist–patient communication. Patients reported feeling supported, which not only improved their emotional well-being but also encouraged adherence to recommended treatments [15].

Similarly, a study in a rheumatology clinic with 62 female patients reported high satisfaction with pharmacist-provided information, service techniques, ethical competence, and communication skills [16]. In Iran, Fesharaki (2019) observed high patient satisfaction among 326 participants, strongly influenced by both verbal and non-verbal communication during counseling, including tone of voice, body language, eye contact, and attentiveness, which enhanced patients' overall experience [17].

Patient satisfaction with drug therapy monitoring services

Table 3 presents eight studies evaluating patient satisfaction with drug therapy monitoring services in clinical pharmacy. Seven of these studies reported high satisfaction, while one study indicated lower satisfaction levels with this aspect of clinical pharmacy care.

Table 3. Patient satisfaction with drug therapy monitoring services

Authors	Country	Participants	Factors influencing satisfaction	Key findings	Funding
Martin MT and Faber DM, 2016	United States of America	64 patients undergoing Hepatitis C Virus (HCV) therapy	HCV treatment support and adherence counseling	Patients reported strong satisfaction with the clinical pharmacist's role in managing their HCV care.	Not Applicable
Reich CM *et al*., 2018	United States of America	240 patients with psychiatric conditions	Satisfaction with monitoring of antipsychotic medications	Low patient satisfaction was associated with prescriber-dominated discussions during consultations with psychiatric patients.	Not Applicable
Crespo and Tyszka, 2017	Canada	112 chemotherapy recipients	Clinical pharmacy services and follow-up for chemotherapy patients	95.5% of participants (n=112) found the initial pharmacist consultation during chemotherapy valuable.	Not Applicable
Beyene K *et al*., 2020	New Zealand	305 warfarin users enrolled in the Community Pharmacist-led Anticoagulation Management Service (CPAMS)	Satisfaction with CPAMS, communication quality, confidence in pharmacist expertise, and patient–pharmacist rapport	Mean overall satisfaction was 94.5% ± 13.1 (range 3%–100%).	Not Applicable
Bezuidenhout *et al*., 2014	South Africa	300 patients on antiretroviral therapy	Satisfaction with antiretroviral treatment (ART) management	Nearly all patients (n=297; 98%) were content with the care provided at ART sites.	Not Applicable
Chou YC *et al*., 2019	Taiwan	741 patients receiving healthcare services	Trust in physicians and pharmacists, overall patient satisfaction	Patient trust was positively correlated with both satisfaction and collaboration with clinical pharmacists.	Taiwan National Science Council
Sites BD *et al*., 2018	Lebanon	19,566 patients with musculoskeletal disorders	Satisfaction with prescribed opioid therapy	Patients using opioids for musculoskeletal pain generally expressed satisfaction with their regimen.	Not Applicable

Patient satisfaction with drug therapy monitoring services

In the United States, patient satisfaction with drug therapy monitoring services varies. Martin and Faber (2016) reported that 64 patients undergoing Hepatitis C Virus (HCV) treatment were highly satisfied with pharmacist-led drug therapy monitoring. The clinical pharmacist-managed HCV program offered medication access support, education on treatment adherence, and adverse drug reaction management, with patients rating their overall experience as "great" [18]. In contrast, Reich *et al*. (2018) found that inadequate communication between prescribers and patients contributed to lower satisfaction levels [19].

In New Zealand, Beyene *et al*. (2021) found that patients on warfarin monitored through the Community Pharmacist-led Anticoagulant Management Service (CPAMS) expressed very high satisfaction, with a mean score of 94.5% ± 13.1 (range 3%–100%). Key factors driving satisfaction included patient-centered communication, pharmacist competence, the patient–pharmacist relationship, confidence in CPAMS, and the pharmacy environment. Additionally, older age and more frequent pharmacy visits were positively associated with satisfaction [20].

In South Africa, 300 patients on antiretroviral therapy for at least four months reported overall high satisfaction, though some concerns were noted regarding limited opportunities to discuss treatment issues, long waiting times, and facility cleanliness [21]. In Canada, 107 of 112 chemotherapy patients reported very high satisfaction with pharmacist-led monitoring, particularly regarding information provision and follow-up care, demonstrating the effectiveness of proactive pharmacist involvement [22].

In Taiwan, patients with multiple conditions and prescriptions reported high satisfaction, largely due to strong trust in pharmacists. This trust was positively linked to patient cooperation and overall satisfaction, highlighting the importance of pharmacists spending sufficient time with each patient to provide detailed information [7]. Similarly, a study in Lebanon among musculoskeletal patients receiving multiple prescriptions found high satisfaction with drug therapy services, reflecting the quality of pharmacist care for patients with musculoskeletal conditions, including those using prescription opioids [23].

Patient satisfaction with patient support program services

Table 4 summarizes three studies on patient satisfaction with support programs. Overall, patients reported feeling comfortable and expressed high levels of satisfaction with the services provided through these programs.

Table 4. Patient satisfaction with patient support program services

Authors	Country	Participants	Factors influencing satisfaction	Key findings	Funding
Hatton J *et al*. (2017)	United States of America	57 patients receiving care via in-person or clinical video teleconferencing (CVT) pharmacy clinics	Perceived convenience, quality of pharmacist–patient communication, pharmacist competence and skills	High satisfaction with patient-centered communication delivered by clinical pharmacists through both CVT and face-to-face interactions	Not applicable
Mooney EV *et al*. (2018)	United States of America	161 patients receiving long-acting injectable antipsychotics (LAIA)	Privacy levels, ease of scheduling appointments, access to pharmacy services, location convenience, trust in the pharmacist	Strong satisfaction with LAIA administration services provided by community pharmacists	Not applicable
Bourdin A *et al*. (2020)	Switzerland	17 patients enrolled in the Fingolimod Patient Support Program (F-PSP)	Perceived safety and medication adherence supported by the F-PSP approach	Overall satisfaction with the F-PSP	Development of the F-PSP supported by an unrestricted grant from Novartis Pharma Schweiz AG

Hatton *et al*. (2018) in the United States found that patients reported similar satisfaction levels with Clinical Video Teleconferencing (CVT) and in-person consultations, indicating that virtual consultations were as effective as

face-to-face meetings. Satisfaction was influenced by factors such as convenience, pharmacist communication, and the pharmacist's competence and clinical skills [24].

Similarly, Mooney *et al*. (2018) evaluated patients receiving treatments with aripiprazole, paliperidone palmitate, and risperidone through a long-acting injectable antipsychotic (LAIA) program in the U.S. Patients expressed high satisfaction, with key determinants including privacy, ease of scheduling consultations, accessibility of pharmacy services, proximity of the pharmacy, and confidence in the pharmacist [25].

In Switzerland, Bourdin *et al*. (2020) studied 17 participants in the Fingolimod Patient Support Program (F-PSP), finding high satisfaction with pharmacist-led consultations focused on treatment safety, adherence, and holistic support. Patients reported that motivational-based counseling and the use of program tools enhanced their involvement in personal health management. Pharmacists were recognized as playing a vital role in patient care and overall treatment management [26].

Patient satisfaction with pharmaceutical care services

Table 5 presents seven studies examining patient satisfaction with pharmaceutical care services. Six studies reported high levels of patient satisfaction, while one study indicated lower satisfaction.

Table 5. Patient satisfaction with pharmaceutical care services

Authors	Country	Sample size	Key factors influencing satisfaction	Key findings	Funding source
El-Sharif SI *et al*. (2017)	United Arab Emirates	375 patients (with medical and non-medical education)	Overall satisfaction with pharmaceutical care services	77.1% of patients reported being satisfied with pharmacists' support.	Not applicable
Ali HS *et al*. (2019)	United Arab Emirates	210 pharmacy visitors	Accessibility and clarity of pharmacists' pharmaceutical care	39% of patients were very satisfied with pharmacists' professional counseling; 72.8% were satisfied with the clear, easy-to-understand language used.	Not applicable
Soeiro OM *et al*. (2017)	Brazil	8,803 patients across Brazil's five geopolitical zones	Convenience and availability of pharmaceutical care services	58.4% of patients were satisfied with pharmaceutical care services.	Department for Pharmaceutical Services and Strategic
Takaki H *et al*. (2015)	Japan	407 patients in Fukuoka Prefecture	Satisfaction with information provided in pharmaceutical care	Patient satisfaction with pharmaceutical care was associated with alignment between pharmacists' and patients' perceptions of information delivery.	Not applicable
Abebe TB *et al*. (2016)	Ethiopia	291 patients living with HIV/AIDS	Privacy levels, ease of scheduling consultations, and convenience of pharmaceutical care	Overall satisfaction was relatively low, with mean scores of 2.86, 2.88, and 2.99 on a 5-point Likert scale.	Not applicable
Mináriková *et al*. (2016)	Slovakia	2,844 respondents aged ≥40 years	Pharmacy location, experience with qualified staff, service convenience, health screenings, and self-service options	Patients showed high satisfaction with pharmaceutical services, particularly in interpersonal aspects.	Not applicable

In the United Arab Emirates, El-Sharif *et al*. (2017) reported that 77.1% of patients were satisfied with pharmaceutical care services. Satisfaction was influenced by factors such as pharmacist experience, trustworthiness, courtesy, and confidence in their professional abilities. Despite this, many patients remained unaware of the type of information they should receive about their medications, highlighting the need for pharmacists to fully exercise their role for optimal patient benefit [27]. Similarly, Saad Ali *et al*. (2019) found that

72.8% of patients were very satisfied with the use of simple and understandable language by pharmacists, although privacy during consultations was a notable concern [28].

In Ethiopia, Abebe *et al*. (2016) studied 291 HIV/AIDS patients using a 5-point Likert scale and found relatively low satisfaction, with a mean score of 2.46. High patient expectations contrasted with limitations such as uncomfortable waiting areas, inadequate private counseling spaces, and long waiting times, which affected overall satisfaction [29].

Soeiro *et al*. (2017) conducted a study on 8,803 patients across five regions of Brazil and reported that 58.4% were satisfied with pharmaceutical services. Satisfaction was closely linked to patients' comfort in communicating with pharmacists [30]. In Slovakia, Mináriková *et al*. (2016) surveyed 2,844 patients and found high satisfaction with pharmaceutical care, particularly in interpersonal relationships (1.85 ± 0.598; 86.7% highly satisfied) and general satisfaction (2.02 ± 0.643; 71.3% highly satisfied). Managing therapy received slightly lower satisfaction scores (2.24 ± 0.704; 65.4% highly satisfied), with most visits related to prescription (70.4%) and over-the-counter medications (70.4%). These findings suggest that pharmacists should continue enhancing professional behavior to improve care delivery [31].

Limitations

This review has several limitations. First, due to limited information on healthcare systems in the countries studied, it does not account for system differences that may affect patient satisfaction levels. Second, cultural differences may influence patient satisfaction, limiting the generalizability of the findings. Nevertheless, this review provides an overview of patient satisfaction with clinical pharmacy services and the factors that affect it.

Conclusion

Overall, patients generally report satisfaction with clinical pharmacy services, including counseling, drug therapy monitoring, patient support programs, and pharmaceutical care. Satisfaction is mainly influenced by service quality, convenience, ease of accessing information, and confidence in the pharmacist's competence. Therefore, community pharmacists should continue to develop their knowledge and clinical skills to maximize the benefits of their services for patients.

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