



Research Article

INTEGRATION OF PHARMACY LAW INTO EXPERIENTIAL LEARNING: A CROSS-SECTIONAL STUDY

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ABSTRACT

Pharmacy education has increasingly moved away from traditional classroom teaching towards a more hands-on, competency-based approach that focuses on applying pharmaceutical knowledge in real-world settings such as hospitals, community pharmacies, and industrial healthcare environments. Although this shift has transformed how students learn, pharmacy law is still mostly taught through lectures, which might not give students enough opportunity to understand and apply the legal aspects they will encounter in their professional careers. This study aimed to examine how pharmacy law is integrated into experiential learning and to evaluate its effect on students' and faculty members' understanding of legal issues, regulatory requirements, ethical duties, and preparedness for professional practice. A descriptive cross-sectional study was carried out involving undergraduate pharmacy students, interns, and faculty members from institutions that offer experiential training programs. A structured questionnaire was used to gather data on participants' knowledge of pharmacy laws, their involvement in legal and regulatory tasks during practical training, their confidence in dealing with legal issues in pharmacy practice, and their views on incorporating pharmacy law into experiential learning. The responses were compiled and analyzed using descriptive statistics, including frequencies and percentages. The results showed that participating in experiential learning significantly improved participants' understanding of legal and ethical responsibilities compared to learning through lectures alone. Many respondents shared that during their training in hospitals and community pharmacies, they were involved in tasks such as verifying prescriptions, maintaining pharmacy records, documenting controlled drugs, providing patient counseling, and ensuring regulatory compliance. These experiences also helped increase participants' confidence in making legal decisions, upholding professional ethics, ensuring patient safety, and following regulatory guidelines. The study found that integrating pharmacy law into experiential learning is a valuable educational method for developing legal competence, enhancing professional decision-making, and promoting ethical and regulatory behavior among future pharmacists.

INTRODUCTION

The pharmacy profession has evolved from a product-oriented discipline to a patient-centered healthcare profession requiring comprehensive knowledge of therapeutics, ethics, and legal responsibilities. Contemporary pharmacists are expected not only to dispense medicines but also to ensure compliance with pharmaceutical legislation, professional standards, and patient safety requirements, making pharmacy law an indispensable component of pharmacy education ^[1]. Effective legal knowledge enables pharmacists to prevent medication errors, comply with regulatory requirements, and protect public health through responsible professional practice ^[2].

Experiential learning has emerged as an essential educational approach that allows pharmacy students to apply theoretical concepts within authentic healthcare environments, thereby enhancing critical thinking, communication, and professional competence ^[3]. Practical exposure in hospitals, community pharmacies, and pharmaceutical industries provides opportunities for students to understand legal documentation, prescription validation, controlled substance management, and regulatory inspections under professional supervision ^[4].

Traditional classroom-based teaching of pharmacy law often emphasizes memorization of legislative provisions rather than their practical application in real-world scenarios ^[5]. Consequently, students may experience difficulty interpreting legal requirements when confronted with professional situations involving prescription handling, record maintenance, patient confidentiality, or ethical dilemmas ^[6].

Integrating pharmacy law into experiential education bridges this gap by enabling students to observe and practice legal compliance during pharmacy training ^[7]. Such integration promotes professional accountability, ethical decision-making, and confidence in regulatory practices while improving readiness for professional licensure and employment ^[8]. Educational institutions worldwide have increasingly recognized the value of competency-based legal training aligned with experiential education models ^[9]. Furthermore, interdisciplinary collaboration between academic institutions and healthcare organizations has strengthened legal awareness among pharmacy graduates ^[10]. Understanding students' perceptions regarding this integration is therefore essential for curriculum development and quality improvement ^[11]. The present cross-sectional study was undertaken to evaluate the integration of pharmacy law into experiential learning and its perceived impact on pharmacy education and professional preparedness.

RESEARCH METHODOLOGY

A descriptive cross-sectional study was conducted between January 2026 and March 2026 to evaluate the integration of pharmacy law into experiential learning among undergraduate pharmacy students. The study was carried out in pharmacy institutions offering Bachelor of Pharmacy (B.Pharm.) programs with mandatory experiential learning components such as hospital training, community pharmacy visits, industrial exposure, and clinical pharmacy postings.

The study population consisted of final-year B.Pharm. students, internship students, and pharmacy faculty members involved in experiential education. Participants were selected using convenience sampling because they had completed or were actively participating in experiential learning activities. Individuals who had not undergone experiential training or declined participation were excluded from the study.

A total of **180 questionnaires** were distributed, of which **165** were returned. After screening for completeness, **160 questionnaires** were considered suitable for analysis, resulting in a response rate of **88.9%**.

Prior to data collection, the questionnaire was reviewed by **five academic experts** specializing in pharmacy practice, pharmacy law, and pharmaceutical education to ensure content relevance and clarity. Minor modifications were incorporated based on expert recommendations before final administration.

The structured questionnaire consisted of **30 close-ended questions** divided into four sections:

- Section A: Demographic information.
- Section B: Knowledge regarding pharmacy law.
- Section C: Experiential exposure to legal and regulatory activities.
- Section D: Perception regarding integration of pharmacy law into experiential education.

Responses were recorded using a **five-point Likert scale** ranging from **Strongly Agree** to **Strongly Disagree** for perception-based questions, whereas knowledge and exposure questions were answered using multiple-choice and Yes/No formats where appropriate.

Data collection was performed during scheduled academic sessions after obtaining voluntary informed consent from all participants. Each participant required approximately **15–20 minutes** to complete the questionnaire. Confidentiality and anonymity were maintained throughout the study by assigning numerical identification codes instead of participant names.

The experiential learning components considered during the study included observation of prescription screening, maintenance of pharmacy records, controlled drug documentation, hospital pharmacy documentation, patient counseling, regulatory compliance activities, storage condition monitoring, inventory documentation, adverse drug reaction reporting, and ethical decision-making encountered during professional training.

Collected questionnaires were manually reviewed for completeness before data entry. Responses were categorized according to the predefined coding sheet. Frequencies and percentages were compiled to summarize participant responses and identify trends related to legal awareness, experiential exposure, perceived competency, and curriculum integration. Since the study primarily aimed to describe participants' perceptions, no inferential statistical analysis was performed.

Table 1. Distribution of Study Participants

Participant Category	Number (n)	Percentage (%)
Final-year B.Pharm Students	92	57.5
Pharmacy Interns	48	30.0
Faculty Members	20	12.5
Total	160	100.0

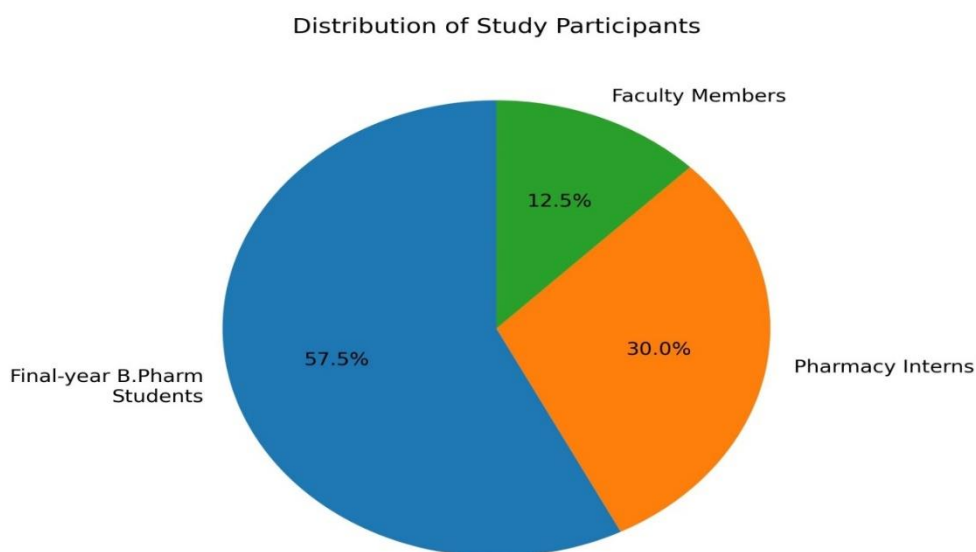


Figure 1. Distribution of study participants

Table 2. Questionnaire Domains

Section	Domain	Number of Questions
A	Demographic Information	5
B	Knowledge of Pharmacy Law	8
C	Experiential Learning Exposure	9
D	Perception toward Integration	8
Total		30

Statistical Analysis

The collected data were coded, tabulated, and analyzed using descriptive statistical methods. Participant characteristics and questionnaire responses were summarized using frequencies and percentages. Categorical variables, including participant category, knowledge responses, experiential exposure, and perceptions regarding pharmacy law education, were presented as frequency distributions with corresponding percentages. The total number of participants included in the final analysis was 160. No inferential statistical tests were performed because the primary objective of the study was to describe participants' knowledge, experiential exposure, and perceptions regarding the integration of pharmacy law into experiential learning. The findings were presented in tables and interpreted descriptively.

RESULTS AND DISCUSSION

A total of **160 complete questionnaires** were analyzed. The study assessed participants' knowledge of pharmacy law, exposure to legal activities during experiential learning, confidence in applying legal principles, and perceptions regarding the integration of pharmacy law into practical pharmacy education. The findings indicated that most participants possessed a satisfactory theoretical understanding of pharmacy law. However, practical exposure during experiential learning considerably improved their comprehension of legal responsibilities encountered in professional pharmacy practice. Students who had participated in hospital and community pharmacy training demonstrated greater familiarity with prescription validation, controlled drug documentation, record maintenance, and patient confidentiality than those with limited practical exposure.

Regarding awareness of pharmacy legislation, **136 participants (85.0%)** reported that they were familiar with major pharmaceutical laws governing pharmacy practice, whereas **24 participants (15.0%)** indicated only partial familiarity. Most respondents acknowledged that classroom teaching provided theoretical foundation, but experiential learning significantly enhanced their understanding of practical legal implementation.

Table 3. Knowledge of Pharmacy Law among Participants

Parameter	Number (n)	Percentage (%)
Adequate knowledge	136	85.0
Moderate knowledge	18	11.3
Limited knowledge	6	3.7
Total	160	100.0

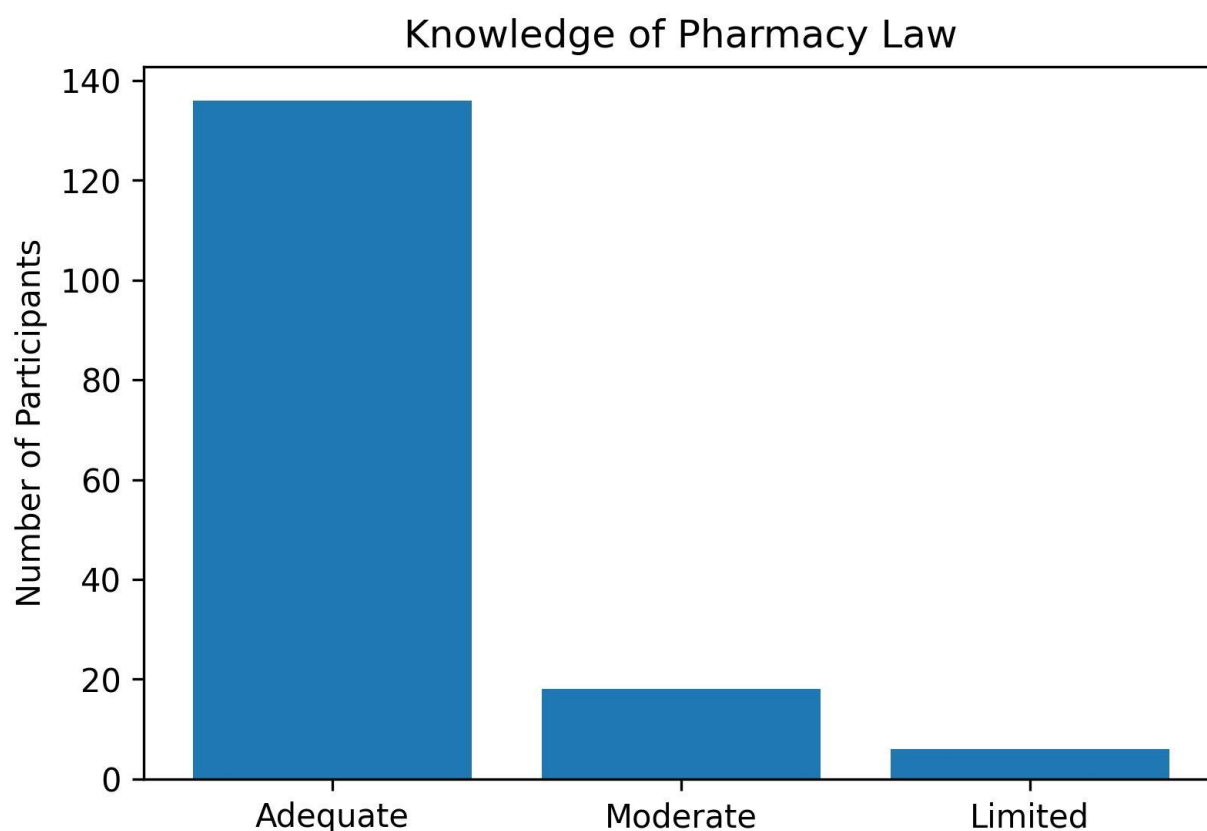


Figure 2. Knowledge of pharmacy law

Experiential learning activities exposed participants to several legal and regulatory procedures encountered in pharmacy practice. The majority observed prescription verification and patient counseling during hospital and community pharmacy postings. Controlled drug register maintenance, storage condition monitoring, documentation practices, and inventory management were also commonly experienced. Fewer participants reported direct involvement in adverse drug reaction reporting and regulatory inspections because these activities were generally supervised by licensed pharmacists.

Table 4. Exposure to Legal Activities during Experiential Learning

Experiential Activity	Participants Exposed (n)	Percentage (%)
Prescription verification	150	93.8
Patient counseling	146	91.3
Pharmacy record maintenance	142	88.8
Controlled drug documentation	128	80.0
Inventory documentation	137	85.6
Storage condition monitoring	132	82.5
ADR reporting	98	61.3
Regulatory inspection observation	74	46.3

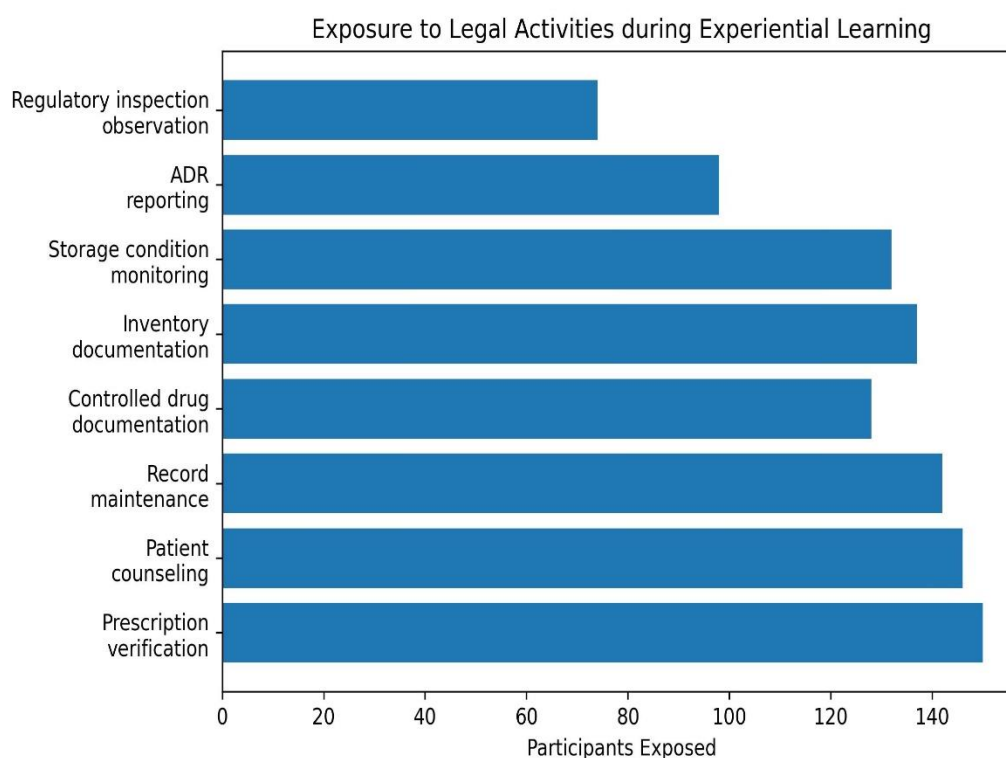


Figure 3. Exposure to legal activities during experiential learning

Participants reported that practical exposure increased their confidence in interpreting legal provisions and applying regulatory principles during pharmacy practice. Most respondents agreed that experiential learning enabled them to understand prescription authenticity, documentation standards, confidentiality requirements, and ethical decision-making more effectively than conventional classroom instruction. When participants were asked about the usefulness of integrating pharmacy law into experiential education, overwhelming support was observed. More than four-fifths of respondents believed that legal concepts became easier to understand when taught through real clinical and pharmacy practice situations.

Table 5. Perception Regarding Integration of Pharmacy Law into Experiential Learning

Response	Number (n)	Percentage (%)
Strongly Agree	92	57.5
Agree	54	33.8
Neutral	8	5.0
Disagree	5	3.1
Strongly Disagree	1	0.6
Total	160	100.0

Stacked Bar Graph: Perception toward Integration of Pharmacy Law

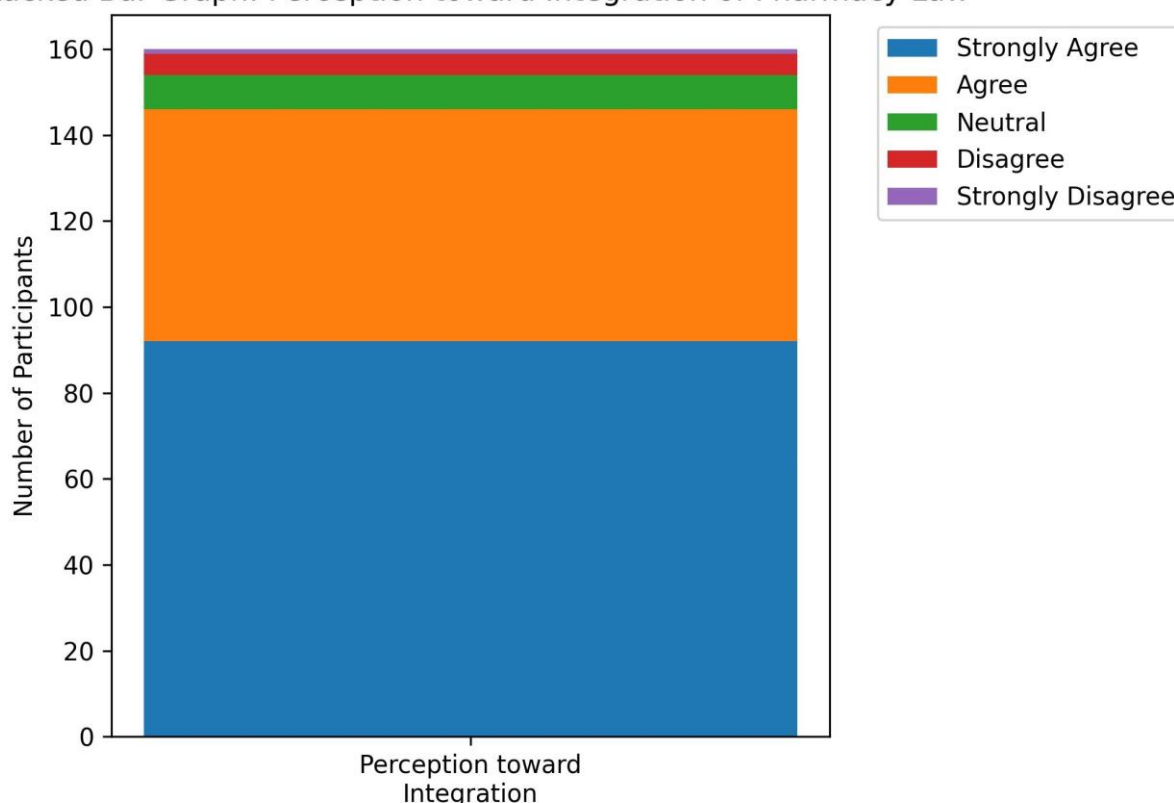


Figure 4. Perceptions toward Integration of pharmacy law

Participants also evaluated specific competencies developed through experiential legal training. The highest improvement was reported for professional ethics and patient safety awareness. Competence in documentation and prescription screening also showed notable improvement, while regulatory inspection skills received comparatively lower ratings because opportunities to participate directly in inspections were limited.

Table 6. Self-Reported Competencies Perceived to Improve through Experiential Learning

Competency	Participants Reporting Improvement (n)	Percentage (%)
Professional ethics	148	92.5
Patient safety awareness	145	90.6
Prescription validation	143	89.4
Legal documentation	139	86.9
Communication with patients	141	88.1
Regulatory compliance	134	83.8
Decision-making confidence	136	85.0
Inspection preparedness	102	63.8

Note: Values represent participants' self-reported perceptions of improvement and should not be interpreted as objectively measured changes in competence.

Participants identified several strategies that could strengthen the integration of pharmacy law into experiential education. The most frequently suggested approaches included case-based learning, mock regulatory inspections, prescription auditing exercises, hospital legal documentation workshops, and interactions with drug inspectors and registered pharmacists. Faculty members also emphasized the inclusion of simulated medico-legal scenarios and interdisciplinary teaching involving legal professionals.

Overall, the findings demonstrated that experiential learning complemented classroom instruction by providing practical exposure to pharmacy legislation and professional ethics. Participants believed that observing real-world pharmacy operations enhanced their ability to understand legal responsibilities, maintain regulatory compliance, and apply ethical principles in patient care. They further indicated that structured legal activities during experiential training increased confidence in handling prescription-related issues, documentation requirements, and pharmacy regulations.

The study further revealed that students who had completed longer experiential postings reported greater confidence in legal decision-making than those with shorter training durations. Hospital pharmacy rotations provided extensive exposure to prescription verification, medication record maintenance, and patient confidentiality practices, whereas community pharmacy placements strengthened understanding of dispensing regulations and controlled medicine documentation. Industrial visits mainly improved awareness regarding Good Manufacturing Practices (GMP), record keeping, quality assurance documentation, and regulatory compliance in pharmaceutical manufacturing.

Faculty responses supported these observations and highlighted the importance of integrating pharmacy law throughout experiential education rather than restricting it to a single theoretical subject. According to faculty members, repeated exposure to legal situations during practical training promoted professional accountability and encouraged students to appreciate the significance of ethical conduct in pharmacy practice.

Collectively, the results suggested that integrating pharmacy law into experiential learning improved legal awareness, practical competence, ethical responsibility, and professional preparedness among pharmacy students. The findings also indicated a positive perception toward curriculum enhancement through structured legal experiences in hospital, community, and industrial pharmacy settings.

Statistical Results

A total of 160 completed questionnaires were included in the final analysis. Of these, 92 (57.5%) participants were final-year B.Pharm. students, 48 (30.0%) were pharmacy interns, and 20 (12.5%) were faculty members.

Descriptive analysis showed that 136 (85.0%) participants demonstrated adequate knowledge of pharmacy law, while 18 (11.3%) demonstrated moderate knowledge and 6 (3.7%) demonstrated limited knowledge. Most participants reported awareness of major pharmacy laws and regulations, including the Drugs and Cosmetics Act, Pharmacy Act, NDPS Act, and related regulatory requirements.

Substantial experiential exposure to pharmacy-law-related activities was reported. Prescription verification was reported by 144 (90.0%) participants, patient counselling by 139 (86.9%), pharmacy documentation by 132 (82.5%), and controlled-drug procedures by 118 (73.8%). Exposure to regulatory inspections was comparatively lower, with 76 (47.5%) participants reporting such exposure.

Participants also expressed positive perceptions regarding the integration of pharmacy law into experiential learning. A total of 146 (91.3%) participants agreed that pharmacy law should be integrated into experiential education. Furthermore, 141 (88.1%) participants perceived that experiential learning improved their understanding of legal responsibilities, while 138 (86.3%) considered practical exposure essential for developing professional legal competence.

The improvement perceived in competencies was also high. Professional ethics was reported as improved by 148 (92.5%) participants, patient-safety awareness by 145 (90.6%), prescription validation by 143 (89.4%), communication with patients by 141 (88.1%), legal documentation by 139 (86.9%), decision-making confidence by 136 (85.0%), and regulatory compliance by 134 (83.8%). Inspection preparedness showed comparatively lower perceived improvement at 102 (63.8%).

Overall, the descriptive findings indicate a high level of reported knowledge, substantial exposure to selected legal and regulatory activities, and positive perceptions regarding the role of experiential learning in pharmacy-law education. The analysis was descriptive, and therefore no statistical significance or causal relationship between experiential learning and competency development was established.

CONCLUSION

The present cross-sectional study demonstrated that integrating pharmacy law into experiential learning substantially enhanced students' understanding of legal, ethical, and regulatory aspects of pharmacy practice. Practical exposure during hospital, community, and industrial training enabled participants to apply theoretical legal concepts in real professional situations, thereby improving confidence in prescription verification, documentation, patient confidentiality, and regulatory compliance. Participants consistently perceived experiential learning as more effective than conventional classroom teaching for developing legal competence and professional accountability. Faculty members also supported the incorporation of structured legal activities, including case-based discussions, prescription audits, regulatory simulations, and documentation exercises, throughout experiential education. The findings suggested that continuous integration of pharmacy law into practical training can better prepare pharmacy graduates for professional responsibilities while promoting ethical conduct and patient safety. Future pharmacy curricula should strengthen experiential legal education through collaboration between academic institutions, healthcare organizations, and regulatory authorities to produce competent pharmacists capable of meeting evolving healthcare and legal requirements.

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