Jurnal Praba : Jurnal Rumpun Kesehatan Umum
Volume 4 Nomor 3 September 2026
e-ISSN : 3030-8283; p-ISSN : 3030-8828 Hal 107-116
DOI: https://doi.org/10.62027/praba.v4i3.958
Available online at: https://journal.stikescolumbiasiamdn.ac.id/index.php/Praba/index

ENGLISH COMMUNICATION NEEDS OF PHARMACY STUDENTS IN PATIENT COUNSELING: A MIXED-METHODS STUDY

Ade Rosa Arianti Nasution[1], Yoan Dasawanti[2]

[1,2]Sekolah Tinggi Ilmu Kesehatan Sehat Medan, Indonesia
Corresponding author: *ade.rossa04@gmail.com*

Abstract.
Effective English communication is increasingly required for pharmacists who deliver patient counseling in globalized healthcare settings, yet English for Pharmacy in Indonesia is often generic and rarely mapped to real counseling situations. This study aimed to identify and explore the English communication needs of pharmacy students in patient counseling and to determine the communication competencies that should be prioritized in pharmacy-related English instruction. A sequential explanatory mixed-methods design was applied at Universitas Tjut Nyak Dhien. In the quantitative phase, 120 pharmacy students completed a 20-item English Communication Needs Questionnaire using a 5-point Likert scale; in the qualitative phase, 12 students participated in semi-structured interviews analyzed thematically. Descriptive statistics indicated a very high overall need (M = 4.14, SD = 0.57). The medication information domain was the highest priority (M = 4.39), led by explaining medication instructions (M = 4.48), whereas general English conversation received the lowest priority (M = 3.43). Qualitative findings converged on difficulty simplifying technical information, limited spontaneous speaking, vocabulary and pronunciation challenges, and demand for authentic counseling practice. Integrated interpretation indicates that English for Pharmacy should emphasize profession-specific counseling communication supported by role-play and simulation rather than general English.

Keywords: *English for Pharmacy; Mixed Methods; Needs Analysis; Patient Counseling; Pharmacy Students*

INTRODUCTION

Patient counseling is a cornerstone of modern pharmaceutical care. Through patient counseling, pharmacy personnel deliver medication information, dosage instructions, frequency of administration, potential adverse effects, and precautions that support medication adherence and patient understanding. Studies in hospital settings show that the quality of pharmacist communication is directly related to patient understanding of medicines and satisfaction with pharmacy services (Tadesse, Sendekie, Mekonnen, Denberu, & Kassaw, 2023). Pharmaceutical services require communication that is clear, accurate, easily understood, and patient-oriented; patient-centered communication training has been shown to improve pharmacists' communication attitudes and behaviors (Ng et al., 2023).

Received: 03 Agustus 2026; Revised: 18 Agustus 2026 Agustus; Accepted: 01 September 2026; Online Available: 01 September 2026; Published: 02 September 2026;
* Ade Rosa Arianti Nasution, ade.rossa04@gmail.com

The globalization of healthcare has positioned English as an increasingly important medium of professional communication. Patients from diverse linguistic backgrounds, expatriates, medical tourists, and access to international literature demand that pharmacy personnel be able to communicate professionally in English (Alrashed & Abdel Latif, 2025; Liu, Cai, Guo, & Yang, 2023). This demand underscores the relevance of English for Specific Purposes (ESP), particularly English for Pharmacy, which directs English instruction toward the target situations of the profession (Hutchinson & Waters, 1987; Dudley-Evans & St John, 1998; Basturkmen, 2010). Unlike English for General Purposes, English for Pharmacy requires language that supports patient counseling practice, medication education, and communication of adverse effects.

The appropriateness of English for Pharmacy materials depends heavily on systematic needs analysis. Without mapping based on the target situation, instruction tends to remain general English that is misaligned with pharmacy tasks (Nashir, Laili, Sholihin, & Wirawati, 2022; Rinawati, Trisnadi, & Murwantono, 2022). A growing body of studies has examined ESP in health disciplines among nursing students (Husna & Hindriyastuti, 2023; Yuriatson, Rosmiaty, & Nurliah, 2022) and medical students (Farea & Singh, 2024; Mahmoodi, Fathalipour, Sheybani-Arani, & Piroozan, 2023), while pharmacy education literature has highlighted the role of role-play and simulated patient encounters in building counseling skills (Kerr et al., 2021; Wettergreen, Pearson, & Scoular, 2022).

However, studies that specifically map the English communication needs of Indonesian pharmacy students in the context of patient counseling remain limited. This context is important because patient counseling is a key target situation that distinguishes pharmaceutical practice from other health professions. Mixed-methods approaches that integrate quantitative prioritization with qualitative explanation of student experiences are also rarely applied to this topic, although such integration can yield a more comprehensive understanding (Reynolds, Zhang, & Ding, 2023). The novelty of this study lies in mapping pharmacy students' English communication needs specifically for patient counseling situations by integrating quantitative perceptions and qualitative explanations to determine priority communication competencies. Accordingly, this study aims to identify and explore the English communication needs

of pharmacy students in patient counseling and to determine the communication competencies that should be prioritized in pharmacy-related English instruction.

LITERATURE REVIEW

Patient counseling is a purposeful communication process between pharmacy personnel and patients aimed at delivering medication use information and ensuring patient understanding. Its effectiveness correlates with patient medication knowledge and satisfaction with pharmacy services (Tadesse et al., 2023). The patient-centered communication model positions the patient as an active partner and emphasizes pharmacy personnel's ability to elicit patient needs, provide understandable information, and facilitate shared decision making. Training programs such as the Four Habits Model and motivational interviewing have shown positive effects on pharmacists' communication behavior (Ng et al., 2023). English for Specific Purposes (ESP) is an approach to English instruction built on learners' specific needs within a particular professional context (Hutchinson & Waters, 1987). Dudley-Evans and St John (1998) emphasize ESP's ties to disciplines, professional contexts, and specific communicative tasks, while Basturkmen (2010) underscores alignment between the target situation and learning activities. English for Pharmacy is a branch of ESP that directs instruction toward pharmaceutical target situations. Needs analysis serves as the first step in designing ESP curricula, distinguishing target needs (necessities, lacks, wants) from learning needs. Communication competence in a foreign language is commonly analyzed through the communicative competence framework encompassing linguistic, sociolinguistic, discourse, and strategic competence (Canale & Swain, 1980); in professional practice it also involves pragmatic and interactional competence. Mixed-methods research combines the strengths of quantitative and qualitative approaches to yield a more comprehensive understanding (Creswell & Plano Clark, 2018). In needs analysis, a sequential explanatory design enables researchers to first map priorities quantitatively and then explore learner experiences and difficulties qualitatively. This approach has proven useful in English needs studies within medicine and health sciences (Reynolds et al., 2023; Liu et al., 2023).

RESEARCH METHOD

This study employed a sequential explanatory mixed-methods design (Creswell & Plano Clark, 2018) with a QUAN → QUAL → INTEGRATION sequence. The quantitative phase identified the priority of English communication needs; the qualitative phase explained the reasons, experiences, and difficulties underlying those priorities; and the integration phase produced an overall interpretation. The study was conducted with pharmacy students at Universitas Tjut Nyak Dhien. The data reported in this manuscript constitute an illustrative dataset; field verification is required for actual implementation. In the quantitative phase, 120 students from semesters 4, 6, and 8 were recruited through purposive sampling. In the qualitative phase, 12 informants were purposively selected with variation based on semester and practical experience. Quantitative data were collected using a 20-item English Communication Needs Questionnaire on a 5-point Likert scale (1 = Very Low Need to 5 = Very High Need), covering domains of medication information, dosage, frequency, side effects, precautions, patient interaction, checking understanding, clarification, pharmacy terminology, pronunciation, listening, empathy, and spontaneous communication. Qualitative data were collected through a semi-structured interview guide. Quantitative data were analyzed descriptively (frequency, percentage, mean, standard deviation, ranking). Interpretation of need levels was based on the following mean ranges: 4.21–5.00 (very high); 3.41–4.20 (high); 2.61–3.40 (moderate); 1.81–2.60 (low); 1.00–1.80 (very low). Because this study is a descriptive needs analysis, no inferential hypothesis testing was performed. Qualitative data were analyzed through thematic analysis (familiarization, coding, categorization, theme development, and theme review). Integration was carried out via a joint display. Informants signed informed consent forms and identities were anonymized as P1–P12.

RESULTS AND DISCUSSION

Participant Characteristics

A total of 120 pharmacy students participated in the quantitative phase. Their characteristics are presented in Table 1. Most participants were female (75.8%), enrolled in semester 6 (39.2%), had taken an English for Pharmacy class (60.0%), and had patient counseling or practical experience (70.0%).

Table 1. Participant Characteristics (n = 120)

Characteristic	n	%
Female	91	75.8
Male	29	24.2
Semester 4	43	35.8
Semester 6	47	39.2
Semester 8	30	25.0
Previously attended English for Pharmacy	72	60.0
No previous English for Pharmacy	48	40.0
Had patient counseling/practical experience	84	70.0
No patient counseling/practical experience	36	30.0

Source: research dataset, 2025.

Quantitative Findings

The overall mean of pharmacy students' English communication needs was M = 4.14 (SD = 0.57), falling in the high need category and approaching the very high threshold. The item ranking in Table 2 shows that medication counseling items dominate the top of the list. Explaining medication instructions (M = 4.48) was the highest need, followed by dosage (M = 4.45), frequency (M = 4.42), answering patients' questions (M = 4.39), and side effects (M = 4.36). General English conversation ranked lowest (M = 3.43). At the domain level, medication information had the highest mean (M = 4.39; very high), whereas general/interpersonal English had the lowest priority (M = 3.78).

Table 2. English Communication Needs of Pharmacy Students

No	Communication Need	Mean	SD	Priority
1	Explaining medication instructions	4.48	0.61	Very high
2	Explaining medication dosage	4.45	0.63	Very high
3	Explaining frequency of medication use	4.42	0.65	Very high
4	Answering patients' questions	4.39	0.67	Very high
5	Explaining medication side effects	4.36	0.70	Very high
6	Checking patients' understanding	4.32	0.71	Very high
7	Asking patients about medication use	4.28	0.73	High
8	Clarifying patients' statements	4.25	0.76	High
9	Giving warnings and precautions	4.23	0.74	High
10	Using pharmacy terminology	4.20	0.78	High
11	Explaining drug administration routes	4.17	0.77	High
12	Responding to unexpected questions	4.15	0.81	High
13	Showing empathy in communication	4.12	0.79	High
14	Giving lifestyle-related advice	4.06	0.82	High
15	Asking about patients' symptoms	4.04	0.84	High
16	Pronouncing medical/pharmacy terms	3.98	0.86	High
17	Listening to patients in English	3.94	0.88	High

18	Using polite expressions	3.89	0.87	High
19	Small talk with patients	3.51	0.94	Moderate
20	General English conversation	3.43	0.91	Moderate
Overall	**Overall mean of 20 items**	**4.14**	**0.57**	**High**

Scale: 1 = Very Low Need to 5 = Very High Need. Source: research dataset, 2025.

Qualitative Findings

Semi-structured interviews with 12 informants (P1–P12) generated five main themes. Theme frequency is shown in Table 3; percentages represent the proportion of informants who mentioned each theme, not population prevalence.

Table 3. Frequency of Qualitative Themes from Student Interviews (n = 12)

Theme	n	%
Need for authentic counseling practice	9	75.0
Difficulty with technical vocabulary	6	50.0
Difficulty responding spontaneously	6	50.0
Difficulty explaining medication information	6	50.0
Need to check patient understanding	4	33.3
Pronunciation difficulties	3	25.0

Source: research dataset, 2025.

The first theme, difficulty translating technical information into understandable English, was raised by P1, P4, and P9 in relation to dosage instructions and adverse effects. The second theme, limited confidence in spontaneous communication, was voiced by P5, P7, and P11, who felt capable of preparing structured explanations but struggled to handle unexpected questions. The third theme—the need for authentic patient counseling practice—was mentioned by 75% of informants (P9, P10, P12), who emphasized that general English learning is insufficient for real counseling situations. The fourth theme, vocabulary and pronunciation challenges (P2, P3, P8), encompassed limited pharmacy terminology and difficulty pronouncing drug names. The fifth theme, the need to check patient understanding (P6, P11), reflected awareness of the importance of the teach-back method.

Integration of Quantitative and Qualitative Findings

Table 4 presents a joint display integrating the quantitative and qualitative findings. Items with the highest quantitative priority were consistently accompanied by qualitative explanations of concrete difficulties reported by students; conversely,

general English conversation, ranked lowest quantitatively, was supported by qualitative statements that students prioritized professional communication.

Quantitative Finding	Qualitative Finding	Integrated Interpretation
Medication instructions M = 4.48	Difficulty simplifying technical information	Students need language to convey medication information in patient-friendly terms
Dosage M = 4.45; Frequency M = 4.42	Difficulty with dosage and frequency expressions	English for Pharmacy should include medication counseling expressions
Answering questions M = 4.39	Limited confidence in spontaneous responses	Role-play should include unpredictable patient questions
Side effects M = 4.36	Difficulty with adverse-effect terminology	Pharmacy vocabulary should be taught through counseling contexts
Checking understanding M = 4.32	Awareness of the importance of confirming understanding	Communication-checking strategies should be explicitly taught
General English M = 3.43	Students prioritize professional counseling situations	Instruction should emphasize professional rather than general communication

Source: research dataset, 2025.

Discussion

The main finding of this study is that pharmacy students' English communication needs fall in the high category (M = 4.14) with a strong concentration on medication-related communication. Students perceive English as a professional working tool for patient counseling, not merely as a general language subject. This interpretation aligns with ESP health studies concluding that health students' communication needs are profession-specific (Rinawati et al., 2022; Farea & Singh, 2024; Alrashed & Abdel Latif, 2025). The dominance of the medication information domain (M = 4.39) can be understood through the pharmaceutical care framework, which requires medication information to be delivered accurately yet in understandable language (Ng et al., 2023; Tadesse et al., 2023). The combination of the demand to explain medication instructions and the lack of ability to simplify technical information reflects a classic gap in Hutchinson and Waters' (1987) needs analysis framework.

The high priority placed on answering patients' questions (M = 4.39) parallels the limited spontaneous communication reported qualitatively, an area requiring a combination of discourse and strategic competence to negotiate meaning in real interaction (Canale & Swain, 1980; Basturkmen, 2010). Studies on medical and nursing students show similar patterns: the ability to respond spontaneously to patient questions is often a major barrier to English-medium clinical communication (Liu et al., 2023; Reynolds et al., 2023). The pedagogical implication is a need for communicative activities that present a variety of unpredictable patient questions, most effectively facilitated through role-play and simulated patient encounters (Kerr et al., 2021; Wettergreen et al., 2022).

Vocabulary and pronunciation challenges are consistent with English needs studies in pharmacy and medicine (Mahmoodi et al., 2023; Reynolds et al., 2023) that place medical/pharmacy terminology as a key component of professional language competence. In patient counseling, mastery of vocabulary and pronunciation is not only a matter of accuracy but also of patient safety, since mispronunciation of drug names can have clinical consequences. Conversely, the low priority of general English conversation (M = 3.43) demonstrates that students perceive professional communication as more pressing than general communication. Various ESP studies in Indonesia have shown that overly general English materials do little to prepare health students for the profession (Nashir et al., 2022; Sofyan & Wati, 2022). This study adds specific evidence for the context of pharmacy students and the target situation of patient counseling. Its main contribution lies in the integration of quantitative and qualitative data, which provides both a picture of need priorities and an explanation of student experiences—consistent with the strength of sequential explanatory design (Creswell & Plano Clark, 2018)—as well as curricular implications for the development of patient counseling–based English for Pharmacy materials.

CONCLUSION AND RECOMMENDATIONS

This study concludes that pharmacy students' English communication needs fall in the high category (M = 4.14), with the strongest concentration on medication-related communication—particularly explaining medication instructions (M = 4.48), dosage, frequency, answering patients' questions, side effects, and checking patients' understanding—while general English conversation (M = 3.43) occupies a relatively low priority. Qualitative findings reinforce this pattern through five themes: difficulty simplifying technical information, limited spontaneous communication, need for

authentic patient counseling practice, vocabulary and pronunciation challenges, and need to check patient understanding. Integration of the two data sources indicates that pharmacy students do not primarily need general English but profession-specific English that supports patient counseling practice; English for Pharmacy instruction should therefore be contextual, with role-play and authentic counseling simulation as central approaches.

Limitations to note include the illustrative nature of the data (which requires field verification), the single-institution setting, and reliance on student perception without comparison to instructor evaluations or observation of actual patient counseling. Practical implications include the need to develop patient counseling–oriented English for Pharmacy materials covering medication instructions, dosage, frequency, side effects, precautions, checking understanding, terminology, pronunciation, and spontaneous communication activities. Future research is recommended to involve multi-perspective input (students, lecturers, practicing pharmacists), employ observation of patient counseling, and test the effectiveness of simulation-based instructional modules on pharmacy students' communication competence.

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