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Communicating effects, producing compliance: pharmaceutical counseling and the language of therapeutic responsibility in Indonesian clinics

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ABSTRACT

Background: Pharmaceutical counseling in Indonesian clinics is increasingly central to medication safety, yet side-effect communication is often treated as technical information rather than as language that shapes patient responsibility and therapeutic compliance. **Objective:** This study examines how publicly available Indonesian pharmaceutical counseling materials frame side effects, produce compliance, and distribute therapeutic responsibility among patients, pharmacists, clinicians, and institutional texts. **Method:** Using qualitative discourse-pragmatic analysis, this study analysed 29 verified public and scholarly documents, with 16 primary counseling texts coded through side-effect framing, compliance pragmatics, and therapeutic responsibility mapping. **Results:** Side effects were most frequently framed through warning and risk consequence, especially in relation to antibiotics, tuberculosis therapy, hypertension medication, psychotropic drugs, and self-medication. Compliance was mainly produced through continuation directives, professional consultation instructions, monitoring obligations, dose discipline, and reassurance-supported guidance. Therapeutic responsibility was distributed across patient self-management, professional explanation, shared monitoring, and institutional medication information, although patient responsibility appeared most prominently. **Implication:** These findings suggest that improving adherence requires not only more counseling but also more accountable, comprehensible, and patient-sensitive ways of communicating uncertainty, risk, and continued treatment. **Novelty:** This study advances pharmaceutical communication research by repositioning adherence from a behavioural outcome to a discourse-pragmatic process through which side effects become obligations, warnings, and shared therapeutic duties.

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1. INTRODUCTION

Medication adherence in Indonesia is not only a pharmacological issue but also a communicative problem embedded in everyday clinical encounters. Recent Indonesian evidence indicates the scale of this challenge: Pradipta et al. [1] analysed adherence among 11,408 chronic disease patients, while Alfian et al. [2] examined determinants of non-adherence in 1,750 Indonesian adults with chronic diseases. These large-scale studies show that adherence remains a major concern within chronic care, particularly where long-term medication must be sustained despite bodily discomfort, uncertainty, and fear of adverse effects. At the same time, side effects are not neutral clinical facts; they are experiences that patients must interpret, tolerate,

report, or negotiate. Studies on psychotropic medication, anemia therapy, tuberculosis treatment, and antihypertensive use demonstrate that adverse effects can influence willingness to continue treatment [3], [4], [5], [6]. For this reason, pharmaceutical counseling deserves close linguistic scrutiny.

Existing research has established that pharmacist-led counseling, medication information, patient education, and pharmaceutical care can support adherence, reduce drug-related problems, and improve medication safety [7], [8], [9], [10]. Indonesian scholarship has also examined medication therapy management knowledge among pharmacists, barriers to counseling in diabetes care, antibiotic compliance, and chronic disease adherence [11], [12], [13], [1]. Internationally, studies have explored patient satisfaction with counseling, counseling quality, and variation in side-effect communication across clinical consultations [14], [15], [16]. What remains underexamined, however, is how side effects are linguistically framed as manageable, alarming, temporary, tolerable, or reportable, and how counseling language converts medical risk into patient responsibility. This gap matters because adherence is not produced by information alone but by pragmatic arrangements of warning, reassurance, obligation, and trust.

This study investigates pharmaceutical counseling as a discourse-pragmatic site where side effects and compliance are jointly organized through language. It asks how side effects are communicated in publicly available Indonesian clinical and pharmaceutical counseling materials, what pragmatic strategies are used to encourage continued medication use, and how responsibility for therapeutic safety is distributed among pharmacists, clinicians, patients, and medication instructions. The analysis focuses on counseling segments that explain adverse effects, advise patients not to discontinue treatment without consultation, instruct patients to report symptoms, or translate technical risk into actionable everyday guidance. By doing so, this study connects pharmaceutical care research with medical linguistics, particularly recent Indonesian work on jargon, directive speech acts, language barriers, empathy, telemedicine asymmetry, and communicative risk in health settings [17], [18], [19], [20], [21]. This approach positions counseling not simply as information delivery but as institutional discourse that shapes therapeutic conduct.

This study argues that pharmaceutical counseling does more than describe side effects; it organizes a moral and practical grammar of adherence. In this grammar, patients are often positioned as responsible actors who must continue therapy, monitor symptoms, distinguish tolerable discomfort from danger, and seek professional advice before altering medication use. Yet this responsibility is not purely individual. It is mediated by the clarity, authority, empathy, and risk framing of counseling language. Communication studies in Indonesian healthcare have shown that clinical interaction affects patient understanding and health-related outcomes, while medication adherence research demonstrates the importance of receiving medication information [22], [6]. Building on this evidence, this study tests the proposition that therapeutic responsibility is linguistically distributed rather than simply assigned. Its implication is critical: improving adherence requires not only more counseling, but more accountable ways of communicating uncertainty, side effects, and shared responsibility.

2. LITERATURE REVIEW

2.1. Side-effect communication

Side-effect communication refers to how healthcare professionals explain possible adverse reactions, bodily discomfort, warning signs, and appropriate patient responses during medication use. In biomedical literature, side effects are usually treated as pharmacological risks requiring detection and management; however, communication-oriented studies show that they are also interpretive events shaped by fear, expectation, uncertainty, and trust. Daskivich et al. [16] demonstrate variation in side-effect explanation across prostate cancer consultations, while Caliskan et al. [23] show that nocebo-sensitive communication may influence how patients anticipate symptoms. Collins et al. [3], Niarchou et al. [24], and Ciont et al. [4] further indicate that adverse effects are lived experiences that may challenge treatment continuity.

Side-effect communication can be examined through several indicators: risk framing, uncertainty marking, severity differentiation, actionability, reassurance, and referral instruction. Risk framing concerns whether adverse effects are presented as common, temporary, dangerous, manageable, or requiring immediate professional contact. Uncertainty marking appears in modal expressions such as “may,” “can,” or “in some patients,” while actionability concerns whether patients are told what to monitor, tolerate, avoid, or report. Research on medication leaflets, pictograms, and counseling practice shows that communicative form matters for comprehension and adherence [25], [26], [27]. Thus, side-effect communication is simultaneously informational, pragmatic, and affective.

2.2. Medication adherence and compliance

Medication adherence and compliance are often used interchangeably, yet they carry different assumptions about patient agency. Compliance traditionally implies obedience to professional instruction, whereas adherence suggests negotiated agreement between patient and provider. Recent nursing and pharmacy scholarship has criticised purely obedience-based models because they obscure social barriers,

health literacy, disability, fear, cost, and treatment burden [28], [29], [30]. Indonesian adherence studies reinforce this complexity by linking medication information, chronic illness, disability, and patient characteristics to adherence-related behaviour [31], [2], [1]. Adherence is therefore not only behavioural, but communicatively organized.

The measurable and discursive indicators of adherence include medication-taking regularity, continuation of therapy, non-discontinuation without consultation, response to side effects, and willingness to seek professional advice. Intervention studies have shown that counseling, drug information services, motivational messaging, and modified pharmacy counseling can support medication-taking behaviour in Indonesian and international settings [7], [32], [33], [13], [34]. However, these studies often evaluate counseling as an intervention rather than as language. This leaves insufficient attention to how directives, warnings, mitigations, and reassurance construct adherence as a practical obligation.

2.3. Therapeutic responsibility

Therapeutic responsibility concerns how duties for safe and effective treatment are distributed among patients, pharmacists, physicians, nurses, medication documents, and health institutions. Pharmaceutical care literature typically defines professional responsibility through medication review, counseling, safety monitoring, and prevention of drug-related problems [35], [8], [36], [37]. Yet patient-centred care also transfers responsibility to patients through self-monitoring, reporting, and correct medication use. Indonesian studies on pharmacist readiness, legal challenges, and counseling barriers show that this distribution is institutionally uneven [11], [38], [12]. Responsibility is therefore relational rather than individual.

Indicators of therapeutic responsibility include obligation markers, professional accountability, shared decision language, safety instructions, escalation pathways, and empathic mitigation. Pragmatic theory helps clarify these indicators: Austin and Searle [39] explain how counseling utterances perform actions; Brown and Levinson [40] illuminate mitigation and face-work; Goffman [41] situates counseling within institutional interaction; and Mishler's [42] distinction between medical and lifeworld voices explains why technical instruction may fail without patient-oriented translation. Recent Indonesian medical linguistics strengthens this position by examining jargon, directive acts, language barriers, empathy, and communicative risk in clinical settings [17], [18], [19], [20], [21]. This study therefore treats counseling as a discourse-pragmatic mechanism for organizing side effects, adherence, and responsibility.

3. METHOD

The unit of analysis in this study was the counseling segment, defined as a sentence, clause, institutional instruction, or patient-facing explanation that communicates medication effects, side-effect management, compliance expectations, or therapeutic responsibility. This unit was selected because pharmaceutical counseling operates through discrete pragmatic moves: warning, reassuring, instructing, advising, and assigning responsibility. The corpus consisted of 29 publicly verifiable items: 16 primary counseling or public-health texts, 12 scholarly references, and one institutional context document. Primary data were drawn from Indonesian public health and clinical pharmacy sources, while secondary data supported conceptual framing. This structure allowed this study to analyse counseling language without fabricating clinical encounters.

Table 1. Composition of dataset

Code	Data Type	Source	Location	Period	Number	Characteristics	Status
PCC-ID-PRI-001–005	Primary	Kementerian Kesehatan RI – Ayo Sehat	Indonesia	2023–2026	5	Patient-facing public health articles on hypertension, antibiotics, cancer therapy, HIV, and KIPI	Retained
PCC-ID-PRI-004–005; 008–009; 012; 015–016	Primary	Direktorat Jenderal Kesehatan Lanjutan – Kemenkes RI	Indonesia	2022–2024	7	Clinical pharmacy articles on antidepressants, anticemas, TBC, skizofrenia, antipsychotics, self-medication, and inhaler use	Retained
PCC-ID-PRI-006–007	Primary	Badan Pengawas Obat dan Makanan RI	Indonesia	2006; n.d.	2	Public medication guidance on correct drug use, labels, indications, and side effects	Retained
PCC-ID-PRI-013	Primary	RSUD Kota Padang Panjang	Indonesia	n.d.	1	Hospital page on drug information services	Retained
PCC-ID-PRI-014	Primary	RSJ Babelprov	Indonesia	2022	1	Hospital article on asking pharmacists about medication	Retained
PCC-ID-CTX-001	Context	Badan Pengawas Obat dan Makanan RI	Indonesia	2011	1	Institutional context on national drug information services	Retained
PCC-ID-SEC-001–012	Secondary	Peer-reviewed journals supplied in reference corpus	International/Indonesia	2021–2026	12	Studies on adherence, counseling, side-effect communication, pharmacist barriers, compliance, and patient information	Retained

This study used a qualitative discourse-pragmatic design supported by structured corpus coding. The design was appropriate because the research problem concerns how counseling language organizes side effects, compliance, and responsibility rather than measuring clinical outcomes. It therefore did not infer causal effects between counseling and adherence. Instead, this study examined how institutional texts make medication-related risk actionable through lexical choice, modality, directive force, reassurance, and obligation. The design combined health communication, pharmaceutical care, and pragmatics to interpret counseling as a clinical genre. This approach also preserved alignment between title, corpus, questions, analytical tools, and interpretive claims.

Information sources were divided into primary, secondary, and contextual data. Primary data included official Indonesian public-health articles, clinical pharmacy webpages, regulatory medication guidance, and hospital drug-information pages. Secondary data consisted of peer-reviewed studies on medication adherence, pharmacist counseling, side-effect communication, patient information leaflets, and compliance theory, including recent work by Alfian et al. [7], Pradipta et al. [1], Jaya et al. [12], Rendrayani et al. [11], Daskivich et al. [16], Suppiah et al. [43], Showande and Laniyan [14], and Thummak et al. [28] Contextual data supplied institutional background on drug-information services. This layered source structure ensured that empirical description, scholarly interpretation, and institutional context remained analytically distinct.

Data collection followed a transparent documentary protocol. Search terms included “efek samping obat,” “konseling apoteker,” “patuh minum obat,” “informasi obat,” “aturan pakai obat,” “jangan menghentikan obat,” “antibiotik resistensi,” “terapi antidepresan,” “TBC patuh obat,” and “tanya apoteker.” Materials were restricted to publicly accessible Indonesian sources and scholarly references relevant to counseling, adherence, side effects, or therapeutic responsibility. Each item was recorded with document code, title, date, source, URL, data type, collection context, inclusion reason, and verification note. Duplicate titles and repeated source-domain entries were checked through deduplication keys before final retention.

Data analysis proceeded in three stages. First, side-effect framing was coded by identifying whether adverse effects were normalized, minimized, intensified, uncertain, or linked to action. Second, compliance pragmatics was analysed through directives, modal obligation, reassurance, consequence framing, and consultation instructions. Third, therapeutic responsibility was mapped by locating whether responsibility was assigned to patients, professionals, documents, or shared monitoring practices. Coding was applied to counseling segments rather than entire documents to preserve analytical precision. This staged procedure allowed this study to move from textual description to pragmatic interpretation and then to theoretical synthesis about therapeutic responsibility in Indonesian pharmaceutical counseling.

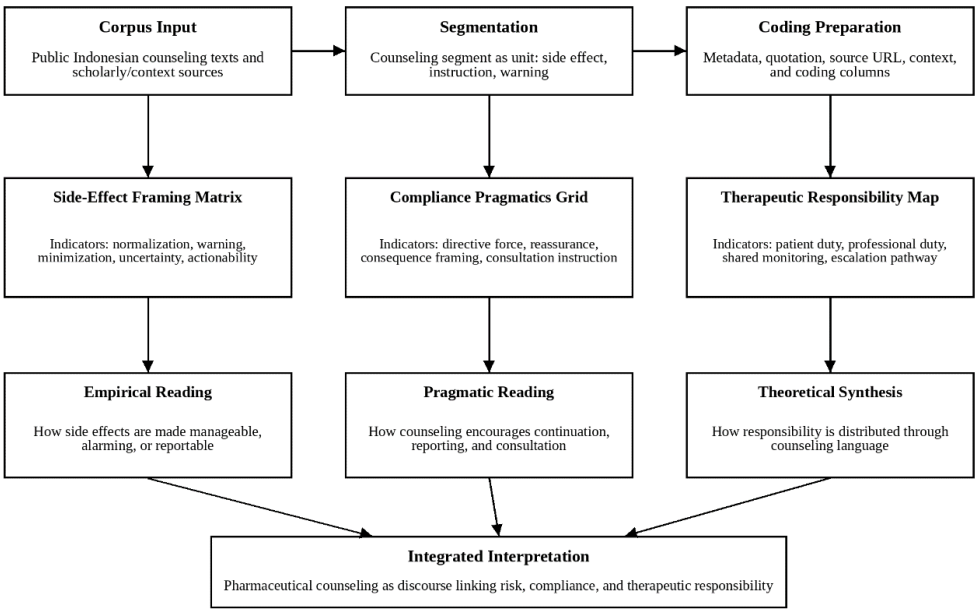


Figure 1. Operational matrix of discourse-pragmatic analysis

4. RESULTS

4.1. Side-effect framing in pharmaceutical counselling

Pharmaceutical counseling materials in this corpus do not present side effects as isolated pharmacological facts. They organize side-effect information through four recurring frames: warning,

disclosure, management, and normalization. Each frame performs a different communicative task. Warning frames link inappropriate medication use to resistance, overdose, or therapeutic failure; disclosure frames locate side-effect explanation within professional counseling; management frames convert adverse reactions into patient or caregiver action; and normalization frames reduce panic while maintaining caution. This distribution is consistent with recent adherence and counseling literature showing that medication information becomes clinically meaningful only when patients understand both risk and required action [6], [1], [15]. This pattern indicates that side-effect communication works as a practical grammar of treatment continuation.

Table 2. Distribution of side-effect framing patterns in Indonesian pharmaceutical counseling corpus

Main Category	Subcategory	Indicator	Frequency	Percentage	Data Variation	Example/Quotation	Data Code
Risk consequence and warning	Resistance, overdose, toxicity, severe reaction, treatment failure	Side effects or unsafe use are framed as risks requiring caution, monitoring, or continued treatment	6	37.5%	Antibiotics, tuberculosis treatment, ARV therapy, antipsychotics, self-medication, inhaler use	"Jangan berhenti minum antibiotik sebelum habis"; "Bahaya bila tidak patuh yaitu resistensi obat"; "Jangan menggunakan lebih dari dosis yang dianjurkan."	PCC-ID-PRI-002; PCC-ID-PRI-005; PCC-ID-PRI-010; PCC-ID-PRI-012; PCC-ID-PRI-015; PCC-ID-PRI-016
Professional disclosure and service framing	Counseling obligation, drug-information service, pharmacist consultation, patient questioning	Side-effect knowledge is positioned as something to be explained, requested, or institutionally provided	4	25.0%	Antidepressant counseling, BPOM medicine guidance, PIO service, pharmacist question campaign	"Efek samping potensial antidepresan perlu disampaikan kepada pasien"; "Tanyakan kepada apoteker tentang informasi obat lebih lanjut."	PCC-ID-PRI-004; PCC-ID-PRI-007; PCC-ID-PRI-013; PCC-ID-PRI-014
Actionable management guidance	Symptom handling, caregiver action, dose discipline, behavioral restriction	Side effects are translated into practical actions that patients or caregivers must perform	3	18.8%	Cancer therapy, anticemas medication, schizophrenia care	"Berikan obat anti-mual sesuai resep dokter"; "Benzodiazepin diminum sesuai aturan pakai yang diberikan dokter."	PCC-ID-PRI-003; PCC-ID-PRI-008; PCC-ID-PRI-009
Normalization and manageability	Expected reaction, individualized risk, supervised continuation	Side effects are presented as possible, common, normal, or manageable when guided by professional advice	3	18.8%	Hypertension medication, general drug-use education, KIPI explanation	"Anda tidak boleh berhenti minum obat tanpa rekomendasi dokter"; "Tidak ada obat yang tidak mempunyai efek samping"; "Efek samping ini masih terbilang normal."	PCC-ID-PRI-001; PCC-ID-PRI-006; PCC-ID-PRI-011

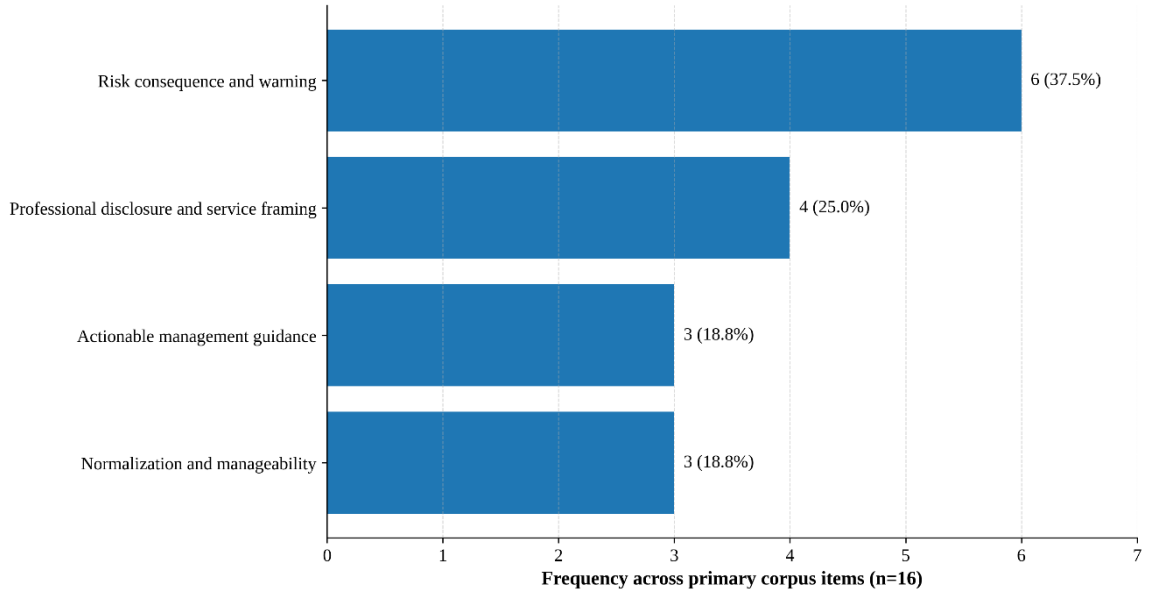


Figure 2. Side-effect framing patterns in pharmaceutical counseling corpus

The dominant pattern is risk consequence and warning, appearing in 6 of 16 primary items. Its linguistic form is direct and preventive: "Jangan berhenti minum antibiotik sebelum habis" constructs unfinished antibiotic use as a danger, while "Bahaya bila tidak patuh yaitu resistensi obat" turns non-adherence into a recognizable therapeutic threat. A second pattern, professional disclosure and service framing, appears in 4 items and shifts emphasis from patient fear to professional explanation, as in "Efek samping potensial antidepresan perlu disampaikan kepada pasien." Management and normalization appear with equal frequency, each covering 3 items. These include practical action—"Berikan obat anti-mual sesuai resep dokter" and reassurance "Efek samping ini masih terbilang normal." The corpus therefore balances caution with actionability.

Side-effect framing in this corpus confirms that counseling language does more than transmit information; it regulates how patients should interpret bodily reactions during therapy. Warning frames resemble what Daskivich et al. [16] identify as variation in side-effect communication, but Indonesian counseling materials often attach warning to compliance imperatives. Normalization and reassurance also resonate with Caliskan et al. [23], who stress that risk communication should avoid unnecessary fear while preserving clinical vigilance. Professional disclosure reflects pharmaceutical-care literature in which pharmacists are responsible for counseling, monitoring, and reducing drug-related problems [11], [12], [37]. This study therefore positions side-effect communication as an institutional practice that distributes risk, action, and responsibility through language.

4.2. Pragmatic strategies for producing medication compliance

Medication compliance in this corpus is produced through pragmatic force rather than through neutral information transfer. The dominant strategy is the continuation or non-discontinuation directive, followed by professional consultation instruction, monitoring and reporting, self-management, and reassurance-supported compliance. This distribution shows that counseling texts frequently transform medication risk into a sequence of permissible and impermissible actions: continue therapy, do not stop medication independently, consult professionals, monitor symptoms, and follow dose rules. Such language reflects a broader pattern in pharmaceutical care research, where counseling is expected to prevent drug-related problems and sustain adherence [7], [8], [9]. The corpus therefore frames compliance as an interactional achievement supported by directive clarity and professional mediation.

Table 3. Distribution of compliance pragmatics in Indonesian pharmaceutical counseling corpus

Main Category	Pragmatic Strategy	Linguistic Indicator	Frequency	Percentage	Data Variation	Example/Quotation	Data Code
Continuation / non-discontinuation directive	Direct prohibition and continuation command	Negative imperative, obligation marker, explicit instruction not to stop therapy	5	31.3%	Hypertension, antibiotics, tuberculosis, ARV therapy, antipsychotic treatment	"Anda tidak boleh berhenti minum obat tanpa rekomendasi dokter"; "Jangan berhenti minum antibiotik sebelum habis"; "Pengobatan TBC harus dilakukan sampai tuntas."	PCC-ID-PRI-001; PCC-ID-PRI-002; PCC-ID-PRI-005; PCC-ID-PRI-010; PCC-ID-PRI-012
Professional consultation instruction	Professional mediation before patient action	Advice to ask, consult, report, or obtain pharmacist/doctor guidance	4	25.0%	BPOM guidance, antidepressant counseling, drug-information service, pharmacist consultation campaign	"Tanyakan kepada apoteker tentang informasi obat lebih lanjut"; "Efek samping potensial antidepresan perlu disampaikan kepada pasien."	PCC-ID-PRI-004; PCC-ID-PRI-007; PCC-ID-PRI-013; PCC-ID-PRI-014
Monitoring and reporting instruction	Patient vigilance and escalation	Instruction to observe symptoms, recognise danger signs, and seek help	3	18.8%	Cancer therapy, KIPI communication, schizophrenia care	"Berikan obat anti-mual sesuai resep dokter"; "Efek samping ini masih terbilang normal"; guidance to observe changes during treatment	PCC-ID-PRI-003; PCC-ID-PRI-009; PCC-ID-PRI-011
Self-management and dose discipline	Regulated medication practice	Correct dose, proper timing, controlled use, and avoidance of unsafe self-adjustment	2	12.5%	Anticemas medication and self-medication guidance	"Benzodiazepin diminum sesuai aturan pakai yang diberikan dokter"; "Jangan menggunakan lebih dari dosis yang dianjurkan."	PCC-ID-PRI-008; PCC-ID-PRI-015
Reassurance-supported compliance	Anxiety reduction attached to continued treatment	Normalization, calming language, and manageable-risk framing	2	12.5%	General medicine education and inhaler-use counseling	"Tidak ada obat yang tidak mempunyai efek samping"; side-effect information is framed as manageable through correct use	PCC-ID-PRI-006; PCC-ID-PRI-016

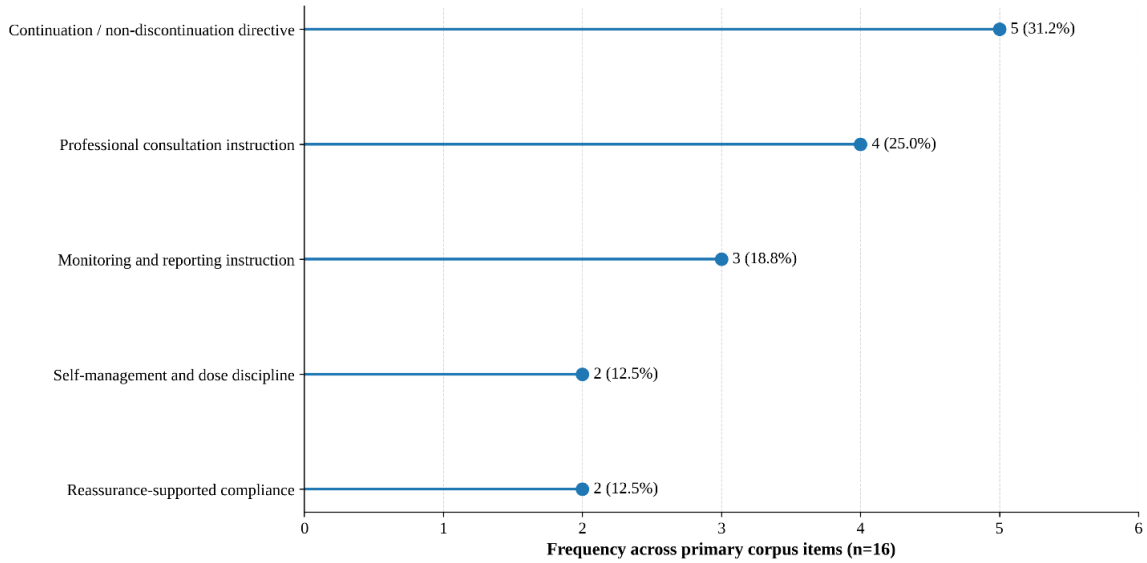


Figure 3. Compliance pragmatics in Indonesian pharmaceutical counseling corpus

The strongest pattern appears in direct prohibitions and continuation commands, occurring in 5 of 16 items. Phrases such as "Anda tidak boleh berhenti minum obat tanpa rekomendasi dokter" and "Jangan berhenti minum antibiotik sebelum habis" rely on negative imperatives to prevent premature discontinuation. Consultation instruction appears in 4 items and softens command through institutional mediation, as seen in "Tanyakan kepada apoteker tentang informasi obat lebih lanjut." Monitoring and reporting language appears in 3 items, especially where side effects are expected but require vigilance. Dose discipline and reassurance-supported compliance are less frequent, each appearing in 2 items. These patterns indicate that Indonesian counseling materials place greatest emphasis on preventing unsupervised medication change.

Compliance pragmatics in this corpus aligns with contemporary critiques of obedience-based compliance. Thummak et al. [28] distinguish compliance as a concept that involves professional expectation, patient behaviour, and clinical context, while Baryakova et al. [29] and Religioni et al. [30] show that adherence depends on more than patient willpower. The data extend this discussion linguistically: obligation is not simply imposed; it is produced through commands, warnings, consultation pathways, and reassurance. Indonesian studies on medication information and chronic disease adherence further support this interpretation, because receiving medication information is linked to adherence-related behaviour but still requires communicative clarity [6], [1]. This study therefore reads compliance as a pragmatic structure of guided responsibility.

4.3. Distribution of therapeutic responsibility in pharmaceutical counselling

Responsibility in this corpus is not assigned to a single actor. It is distributed across patients, professionals, shared monitoring practices, and institutional documents. Patient responsibility is most frequent, appearing in 6 of 16 primary items, followed by professional responsibility in 5 items, shared responsibility in 3 items, and institutional or document-based responsibility in 2 items. This distribution is important because it shows that pharmaceutical counseling does not merely ask patients to obey instructions. It constructs a wider therapeutic order in which patients must continue, monitor, and use medicines correctly, while professionals remain accountable for explanation and guidance. This pattern corresponds with pharmaceutical-care literature that defines counseling as both patient education and medication safety practice [11], [12], [37].

Table 4. Therapeutic responsibility mapping in Indonesian pharmaceutical counseling corpus

Main Category	Responsibility Form	Linguistic Indicator	Frequency	Percentage	Data Variation	Example/Quotation	Data Code
Patient responsibility	Self-monitoring, continuation, dose discipline, correct use	Imperative or obligation marker assigning action to patient	6	37.5%	Hypertension, antibiotics, tuberculosis, anticemas medication, self-medication, inhaler use	"Anda tidak boleh berhenti minum obat tanpa rekomendasi dokter"; "Jangan berhenti minum antibiotik sebelum habis"; "Benzodiazepin diminum sesuai aturan pakai yang diberikan dokter."	PCC-ID-PRI-001; PCC-ID-PRI-002; PCC-ID-PRI-008; PCC-ID-PRI-010; PCC-ID-PRI-015; PCC-ID-PRI-016
Professional responsibility	Counseling, explanation, safety guidance, medication information service	Professional actor is positioned as source of explanation, monitoring, or advice	5	31.3%	Antidepressant counseling, BPOM guidance, drug information service, pharmacist campaign, ARV	"Efek samping potensial antidepresan perlu disampaikan kepada pasien"; "Tanyakan kepada apoteker tentang	PCC-ID-PRI-004; PCC-ID-PRI-005;

					care	informasi obat lebih lanjut."	PCC-ID-PRI-007; PCC-ID-PRI-013; PCC-ID-PRI-014
Shared responsibility	Patient action combined with professional supervision	Conditional or collaborative framing: continue, report, consult, or act according to prescription	3	18.8%	Cancer therapy, schizophrenia care, KIPI communication	"Berikan obat anti-mual sesuai resep dokter"; "Efek samping ini masih terbilang normal"; caregiver/patient action is tied to clinical instruction	PCC-ID-PRI-003; PCC-ID-PRI-009; PCC-ID-PRI-011
Institutional / document responsibility	Label, leaflet, public information, institutional guidance	Written instruction, public guidance, or institutional source carries counseling authority	2	12.5%	General medication education and official drug-use information	"Tidak ada obat yang tidak mempunyai efek samping"; official medication information explains indications, dosage, and side effects	PCC-ID-PRI-006; PCC-ID-PRI-012

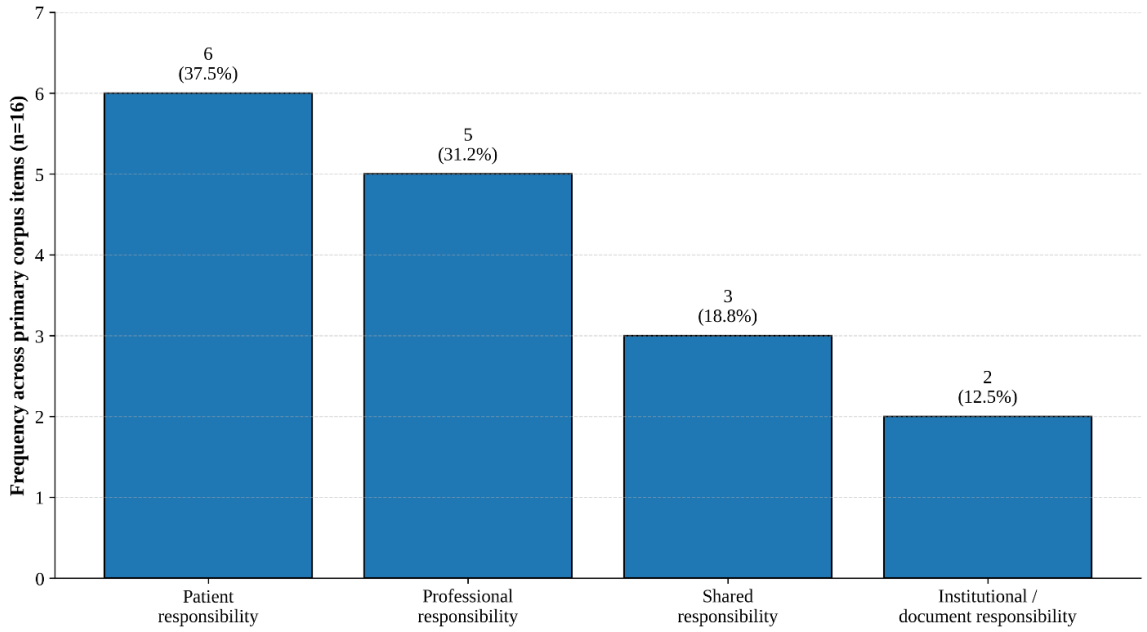


Figure 4. Distribution of therapeutic responsibility in pharmaceutical counseling corpus

The most dominant pattern is patient responsibility, visible in directives such as "Anda tidak boleh berhenti minum obat tanpa rekomendasi dokter" and "Jangan berhenti minum antibiotik sebelum habis." These utterances place patients inside a controlled decision pathway: medication may be continued, but not independently stopped. Professional responsibility appears through counseling obligation and referral language, especially "Efek samping potensial antidepresan perlu disampaikan kepada pasien" and "Tanyakan kepada apoteker tentang informasi obat lebih lanjut." Shared responsibility appears when patient or caregiver action is tied to prescription-based supervision, as in "Berikan obat anti-mual sesuai resep dokter." Institutional responsibility is less frequent but still significant because labels, leaflets, and public guidance stabilize counseling beyond direct face-to-face interaction.

The distribution of responsibility clarifies why compliance cannot be reduced to individual obedience. In pragmatic terms, directives and obligations assign patient duties, but consultation instructions preserve professional authority over safe medication decisions. This finding resonates with De Baetselier et al. [35], who show that pharmaceutical care involves multiple professional responsibilities, and with Gao et al. [8], who link continuous pharmacist-led care with medication adherence and clinical outcomes. At the same time, adherence scholarship warns that patient responsibility should not become blame when treatment is difficult, frightening, or burdensome [29], [30]. This study therefore interprets therapeutic responsibility as linguistically distributed: patients are made accountable, but only within a professional and institutional structure of guidance.

5. DISCUSSION

The predominance of warning-oriented side-effect framing suggests that Indonesian pharmaceutical counseling treats adverse effects not merely as clinical information but as a communicative mechanism for sustaining treatment continuity. Its main function is protective: patients are alerted to risks such as resistance, overdose, toxicity, or treatment failure before they make unsupervised medication decisions. This finding supports studies showing that adverse effects can weaken treatment persistence when patients are not prepared to interpret bodily reactions [3], [24], [4]. Yet warning also has a possible dysfunction. If side effects are framed mainly through danger, counseling may heighten fear rather than improve understanding, especially among patients with low health literacy or previous negative medication experiences. Caliskan et

al. [23] caution that poorly calibrated risk communication may intensify symptom expectation. Thus, this study shows that warning is clinically necessary but communicatively delicate.

The prominence of warning language may reflect an underlying institutional structure in which medication safety is managed through prevention of premature discontinuation. Indonesian counseling texts repeatedly link unsafe medication practices with future harm, particularly in antibiotics, tuberculosis, hypertension, and psychotropic treatment. This pattern is consistent with Limato et al. [44], who identify antibiotic optimization as a major intervention priority in Indonesia, and with Sukmawan et al. [5], who connect tuberculosis treatment with side effects and compliance challenges. However, this structure differs from approaches that foreground shared decision-making or patient narrative as central to therapeutic communication. Daskivich et al. [16] show that side-effect communication varies across consultations, implying that warning is only one possible communicative orientation. In this corpus, warning appears to compensate for uncertainty by making risk actionable. Its underlying logic is not simply fear production, but institutional control over medication continuity.

The emphasis on compliance pragmatics shows that counseling language functions as a bridge between medication knowledge and permitted patient action. Directives such as not stopping treatment, consulting pharmacists, following dose rules, and monitoring symptoms make adherence practically intelligible. This aligns with Alfian et al. [7], Widowati et al. [13], and Saputri et al. [33], who show that pharmacist-led counseling, modified counseling, and medication education can support medication-taking behaviour. Nevertheless, this study adds that compliance is not only an outcome of counseling but also a linguistic achievement within counseling. The possible dysfunction lies in overreliance on imperatives. When patients are repeatedly told what not to do without sufficient explanation, compliance may be framed as obedience rather than informed participation. Thummak et al. [28] warn that compliance remains conceptually contested because it may reduce complex patient behaviour to rule-following. This finding therefore calls for directive clarity balanced with patient-oriented reasoning.

The structure behind compliance pragmatics appears to be a hierarchy of clinical authority moderated by professional accessibility. Patients are instructed not to stop, alter, or overuse medication, but they are also directed toward pharmacists and doctors as legitimate sources of decision-making. This dual structure helps explain why consultation instruction appears alongside prohibition. It prevents unsupervised action while preserving a pathway for patient concern. Such a pattern corresponds with Rendrayani et al. [11], who frame medication therapy management as part of pharmacist responsibility in Indonesia, and with Jaya et al. [12], who identify barriers that shape counseling provision in ambulatory diabetes care. At the same time, Baryakova et al. [29] and Religioni et al. [30] remind us that adherence problems are not solved by instruction alone because treatment burden, access, fear, and daily routines intervene. This study therefore suggests that compliance language works best when command is structurally connected to explanation and reachable professional support.

The distribution of therapeutic responsibility indicates that Indonesian pharmaceutical counseling constructs patients as active but not autonomous managers of treatment. Patients are expected to continue therapy, monitor symptoms, use medication correctly, and avoid independent discontinuation. This has an important function: it gives patients a practical role in medication safety rather than positioning them as passive recipients of prescriptions. However, its dysfunction emerges when responsibility becomes asymmetrical. If patient duties are foregrounded more strongly than professional explanation, institutional access, or shared monitoring, responsibility may slide into blame when adherence fails. This concern is consistent with adherence literature showing that non-adherence is shaped by multiple determinants rather than individual will alone [31], [2], [1]. This study therefore reframes therapeutic responsibility as a communicative distribution of duties, not a moral judgment about compliant or non-compliant patients.

The underlying structure of therapeutic responsibility is relational. Patient responsibility becomes meaningful only because professional and institutional responsibilities remain present in counseling language. Pharmacists, doctors, labels, leaflets, and public health institutions provide interpretive authority through which patients learn which symptoms are tolerable, which require reporting, and which actions are unsafe. This interpretation is supported by De Baetselier et al. [35], Gao et al. [8], and Li et al. [37], who describe pharmaceutical care as distributed across counseling, monitoring, medication safety, and clinical quality improvement. It also resonates with Indonesian medical linguistics research showing that directive speech, jargon, empathy, and language barriers shape clinical understanding [17], [18], [19], [20]. This study does not claim that counseling language directly causes adherence. Rather, it shows that counseling organizes conditions under which adherence becomes understandable, expected, and institutionally supervised.

6. CONCLUSION

This study demonstrates that pharmaceutical counseling in Indonesian clinics does more than communicate side effects as biomedical information; it organizes therapeutic responsibility through warning, reassurance, directive force, and professional mediation. Its central lesson is that compliance is linguistically produced when patients are guided to continue treatment, monitor bodily reactions, consult professionals, and

avoid unsupervised medication changes. The strength of this study lies in its discourse-pragmatic method, which renews adherence research by shifting attention from medication-taking behaviour as outcome to counseling language as practice. This contribution refines questions about side-effect framing, compliance pragmatics, and responsibility distribution in pharmaceutical care.

This study is limited by its reliance on publicly available counseling texts and institutional materials rather than naturally occurring pharmacist–patient interactions. Consequently, it cannot capture prosody, hesitation, repair, patient resistance, misunderstanding, or affective negotiation during face-to-face counseling. Its qualitative corpus also does not permit causal claims about whether particular linguistic strategies improve adherence. Future research should therefore include ethically approved recordings of clinical encounters, multilingual patient groups, pharmacist interviews, and longitudinal adherence data. Comparative work across hospitals, community pharmacies, and primary care clinics would further clarify how therapeutic responsibility changes across institutional settings, medication types, and patient vulnerability.

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Novella Putri Dwijayanti: conceptualization, methodology, formal analysis, writing – original draft, writing – review and editing.

CONFLICT OF INTEREST STATEMENT

Author states no conflict of interest.

AI USE DECLARATION

The author used artificial intelligence tools to assist with the generation of illustrative figures and with the formatting and layout of this manuscript. AI was not used to generate the substantive content, conceptualization, data, analysis, or conclusions of the research, all of which remain the sole responsibility of the author.

INFORMED CONSENT

Not applicable – this study did not involve direct human participants. Data consisted solely of publicly accessible pharmaceutical counseling texts, verified public-health and scholarly documents, and contextual materials on medication adherence, compliance, and therapeutic responsibility.

ETHICAL APPROVAL

This research did not involve human or animal subjects; it analyzed publicly accessible pharmaceutical counseling texts and verified public-health and scholarly documents, and therefore no institutional review board approval was required. Where research does involve human subjects, the author affirms that such research would be conducted in full compliance with all relevant national regulations and institutional policies, in accordance with the tenets of the Declaration of Helsinki, and would be approved by the author's institutional review board or equivalent committee.

DATA AVAILABILITY

The corpus of publicly accessible pharmaceutical counseling texts and verified public-health and scholarly documents on medication adherence, compliance, and therapeutic responsibility analyzed in this study are available from the corresponding author upon reasonable request.

REFERENCES

[1] I. Pradipta, K. Aprilio, Y. F. Ningsih, M. A. A. Pratama, V. Gatera, S. Alfian, A. Iskandarsyah, and R. Abdulah, "How does Indonesian chronic disease patient adhere to their treatment? A cross-sectional analysis of 11,408 subjects," Patient Preference and Adherence, vol. 19, pp. 173-184, 2025.

[2] S. Alfian, M. Griselda, I. L. Hilmi, A. A. Alshehri, I. Puspitasari, and R. Abdulah, "Determinants of medication non-adherence in 1,750 Indonesian adults with chronic diseases: A nationwide cross-sectional study," Patient Preference and Adherence, vol. 20, 2026.

[3] J. Collins, A. J. Wheeler, S. McMillan, J. Hu, S. El-Den, H. Roennfeldt, and C. L. O'Reilly, "Side effects of psychotropic medications experienced by a community sample of people living with severe and persistent mental illness," Health Expectations, vol. 27, 2024.

[4] C. Ciont, R. Pop, L. Pop, D. Vodnar, I. Morariu, R. Suharoschi, and O. Pop, "Impact of side effects on anemia therapy compliance," Nutrients, vol. 17, 2025.

[5] Y. P. Sukmawan, N. Rahayuningsih, and M. Hidayat, "Compliance level and side effects in the treatment of tuberculosis patients: A study from Indonesia," Journal of Health and Medical Sciences, 2024.

[6] S. D. Alfian, S. F. Candradewi, M. Griselda, W. N. Insani, W. Sweileh, and R. Abdulah, "Association between receiving medication information and adherence to antihypertensive medication: Findings from the 2023 Indonesian Health Survey," Patient Preference and Adherence, vol. 19, pp. 4141-4151, 2025.

[7] S. D. Alfian, J. F. M. Van Boven, A. Iskandarsyah, R. Abdulah, E. Hak, and P. Denig, "Process evaluation of implementing a pharmacist-led intervention to improve adherence to antihypertensive drugs among patients with type 2 diabetes in Indonesian community health centers," Frontiers in Pharmacology, vol. 12, 2021.

[8] L. Gao, Y. Han, Z. Jia, P. Wang, M. Zhang, S. Yan, and H. Liu, "Impact of continuous pharmaceutical care led by clinical pharmacists during transitions of care on medication adherence and clinical outcomes for patients with coronary heart disease: A prospective cohort study," Frontiers in Pharmacology, vol. 14, 2023.

[9] J. Plechschmidt, K. Fietkau, T. Hepp, P. Dietrich, S. Fischer, S. Krebs, M. Neurath, F. Dörje, and R. Atreya, "Clinical pharmacist counselling improves long-term medication safety and patient-reported outcomes in anti-TNF-treated patients with inflammatory bowel diseases: The prospective, randomized AdPhaNCED trial," Inflammatory Bowel Diseases, vol. 31, pp. 77-86, 2024.

[10] H. Xiang, Y. Shen, J.-X. Wang, Y. Zhao, B.-W. Yi, and N. Zhao, "Impact of pharmacist-led interventions on oncology drug therapy outcomes: A systematic review and meta-analysis," The International Journal of Pharmacy Practice, 2025.

[11] F. Rendrayani, S. D. Alfian, W. Wahyudin, and I. M. Puspitasari, "Knowledge, attitude, and practice of medication therapy management: A national survey among pharmacists in Indonesia," Frontiers in Public Health, vol. 11, 2023.

[12] M. K. A. Jaya, F. Rahmawati, N. Yasin, and Z. Ikawati, "Pharmacist's perceived barriers in providing counseling services to ambulatory type 2 diabetes mellitus patients: A qualitative phenomenological study in Bali, Indonesia," Journal of Applied Pharmaceutical Science, 2025.

[13] I. Widowati, D. P. Duarsa, N. N. S. Budayanti, A. Diantini, and P. P. Januraga, "Modified pharmacy counseling improves outpatient short-term antibiotic compliance in Bali Province," International Journal of Public Health Science, vol. 11, no. 3, 2022.

[14] S. Showande and M. W. Laniyan, "Patient medication counselling in community pharmacy: Evaluation of quality and content," Journal of Pharmaceutical Policy and Practice, vol. 15, 2022.

[15] Y. B. Tadesse, A. K. Sendekie, B. A. Mekonnen, F. G. Denberu, and A. T. Kassaw, "Pharmacists' medication counseling practices and knowledge and satisfaction of patients with an outpatient hospital pharmacy service," Inquiry: A Journal of Medical Care Organization, Provision and Financing, vol. 60, 2023.

[16] T. Daskivich, A. Naser-Tavakolian, R. Gale, M. Luu, N. A. Friedrich, A. Venkataramana, D. Khodyakov, E. Posadas, H. M. Sandler, B. Spiegel, and S. J. Freedland, "Variation in communication of side effects in prostate cancer treatment consultations," Prostate Cancer and Prostatic Diseases, vol. 28, pp. 145-152, 2024.

[17] N. Laila, "Medical jargon and patient comprehension: A linguistic analysis of informed consent practices in Indonesian hospitals," Indonesian Journal of Medical Linguistics, vol. 1, no. 1, pp. 13-25, 2026.

[18] I. L. Nazulpa, "Doctor-patient communication in rural Indonesia: A pragmatic study of directive speech acts in clinical consultations," Indonesian Journal of Medical Linguistics, vol. 1, no. 1, pp. 1-12, 2026.

[19] M. Nurtyas, "Language barriers in healthcare delivery: A sociolinguistic case study of multilingual patients in Indonesian urban clinics," Indonesian Journal of Medical Linguistics, vol. 1, no. 1, pp. 26-38, 2026.

[20] Y. D. Rusita, "Constructing empathy through language: A linguistic perspective on compassionate communication in mental health services," Indonesian Journal of Medical Linguistics, vol. 1, no. 1, pp. 67-81, 2026.

[21] N. E. C. Dewi, "When fluent advice becomes unsafe: Evaluating accuracy, uncertainty, and communicative risk in Indonesian AI-generated health responses," Indonesian Journal of Medical Linguistics, vol. 1, no. 2, 2026.

[22] D. Effendi, S. Handayani, A. Nugroho, I. Ardani, Y. Fitrianti, K. Karlina, and C. Latifah, "The significance of physician-patient communication on telemedicine patients' health outcomes: Evidence from Indonesia," Health Communication, vol. 39, pp. 1932-1941, 2023.

[23] E. Caliskan, U. Bingel, and A. Kunkel, "Translating knowledge on placebo and nocebo effects into clinical practice," Pain Reports, vol. 9, 2024.

[24] E. Niarchou, L. Roberts, and B. Naughton, "What is the impact of antidepressant side effects on medication adherence among adult patients diagnosed with depressive disorder: A systematic review," Journal of Psychopharmacology, vol. 38, pp. 127-136, 2024.

[25] M. A. Jeraisy, H. Alshammari, M. A. Albassam, K. A. Aamer, and M. Abolfotouh, "Utility of patient information leaflet and perceived impact of its use on medication adherence," BMC Public Health, vol. 23, 2023.

[26] Y. Paşa, M. Arslan, N. Tarhan, and S. şar, "Evaluating attitudes of pharmacy students toward pharmaceutical side effect pictograms: Ankara sample," European Journal of Life Sciences, 2024.

[27] A. Al-Taie, "A systematic review of improper eye drop application and role of pharmacists for patient education," Clinical and Experimental Optometry, vol. 108, pp. 760-770, 2025.

[28] S. Thummak, W. Uppor, and L.-O. Wannarit, "Patient compliance: A concept analysis," Belitung Nursing Journal, vol. 9, pp. 421-427, 2023.

[29] T. H. Baryakova, B. H. Pogostin, R. Langer, and K. J. McHugh, "Overcoming barriers to patient adherence: The case for developing innovative drug delivery systems," Nature Reviews Drug Discovery, vol. 22, pp. 387-409, 2023.

[30] U. Religioni, R. Barrios-Rodríguez, P. Requena, M. Borowska, and J. Ostrowski, "Enhancing therapy adherence: Impact on clinical outcomes, healthcare costs, and patient quality of life," Medicina, vol. 61, 2025.

[31] S. Alfian, M. Griselda, M. A. A. Pratama, W. N. Insani, R. Abdulah, and M. Wawruch, "Factors influencing medication non-adherence in patients with chronic diseases and disabilities: Insights from a national survey in Indonesia," Patient Preference and Adherence, vol. 19, pp. 1557-1572, 2025.

[32] F. Ariyani, P. Sarnianto, and N. Andayani, "The effects of counseling and drug information services by pharmacist to medication adherence and therapy outcomes on sciatica patients at Dr. Suyoto Hospital, Jakarta," Delima, vol. 8, no. 1, pp. 91-95, 2021.
[33] G. Z. Saputri, O. M. Sari, and A. Akrom, "Modified brief counseling-5A, motivational SMS on medication-taking behavior and compliance among diabetic patients," International Journal of Public Health Science, vol. 11, no. 3, 2022.
[34] F. Sabiti, C. N. Fatiha, W. Timur, and P. A. Dewi, "The effect of pharmacist counseling on medication adherence and blood pressure values in hypertensive patients," Pharmacon: Jurnal Farmasi Indonesia, vol. 20, no. 2, 2023.
[35] E. De Baetselier, T. Dilles, H. Feyen, F. Haegdorens, L. Mortelmans, and B. Van Rompaey, "Nurses' responsibilities and tasks in pharmaceutical care: A scoping review," Nursing Open, vol. 9, pp. 2562-2571, 2021.
[36] F. M. Abdul-Kareem and M. Y. Jamal, "The pharmacists' role in reducing drug-related problems in cardiology center in Baghdad-Iraq: A pilot study," Iraqi Journal of Pharmaceutical Sciences, vol. 33, 2025.
[37] H. Li, J. Zhang, S. Sun, W. Luan, and Z.-C. Gu, "Editorial: Clinical pharmacist service promotes the improvement of medical quality, volume II," Frontiers in Pharmacology, vol. 16, 2025.
[38] G. Ayu, R. Widowati, and M. Zamroni, "Indonesia facing challenges of pharmaceutical care implementation in community pharmacies: A legal perspective," Jurnal Hukum Prasada, vol. 10, no. 2, pp. 69-79, 2023.
[39] J. R. Searle, Speech Acts: An Essay in the Philosophy of Language. Cambridge University Press, 1969.
[40] P. Brown and S. C. Levinson, Politeness: Some Universals in Language Usage. Cambridge University Press, 1987.
[41] E. Goffman, "The interaction order: American Sociological Association, 1982 presidential address," American Sociological Review, vol. 48, no. 1, pp. 1-17, 1983.
[42] E. G. Mishler, The Discourse of Medicine: Dialectics of Medical Interviews. Ablex, 1984.
[43] S. Suppiah, M. Goh, X. Yang, Y. Tan, and R. Malhotra, "Language-related self-efficacy of pharmacy staff in providing medication counselling to older adults in a linguistically diverse setting," Exploratory Research in Clinical and Social Pharmacy, vol. 23, 2026.
[44] R. Limato, G. Lazarus, P. Dernison, M. Mudia, M. Alamanda, E. Nelwan, R. Sinto, A. Karuniawati, R. H. Van Doorn, and R. Hamers, "Optimizing antibiotic use in Indonesia: A systematic review and evidence synthesis to inform opportunities for intervention," The Lancet Regional Health - Southeast Asia, vol. 2, 2022.

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