African Educational Research Journal
Vol. 14(2), pp. 453-466, June 2026
ISSN: 2354-2160
Full Length Research Paper

The ideological implications of the use of imperatives in pharmaceutical leaflets

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Accepted 2 June, 2026

ABSTRACT

This study investigates the ideological implications underlying the nature and use of imperatives in pharmaceutical leaflets (PLs). Drawing on Critical Discourse Analysis (CDA) as a methodological framework and ideological discourse analysis as a theoretical anchor, the study analyses five pharmaceutical leaflets sampled from both Ghanaian and international pharmaceutical companies. The problem motivating this inquiry is the discrepancy between the communicative purpose of the printed text and the ideological implications of imperatives to the readers. Thus, it a legal requirement that PLs be written clearly and accessibly for lay users, unexamined ideological functions that imperative constructions serve beyond mere information delivery. Positive Complex Imperative (PCI), Positive Simple Imperative (PSI), Negative Complex Imperative (NCI), and Negative Simple Imperative (NSI) with NCIs being the most frequent (48%). Pharmaceutical companies deploy imperatives to exercise institutional authority, issue directives, warn and prohibit users, and strategically manage epistemic uncertainty through modal auxiliaries such as should, may, can, and must. The study concludes that imperative discourse in PLs is not ideologically neutral; it is a site where pharmaceutical power is enacted, reproduced, and naturalised. Pedagogical and regulatory implications are discussed.

Keywords: Pharmaceutical leaflets, imperatives, critical discourse analysis, ideology, power, modal auxiliaries.

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INTRODUCTION

Background of the study

In contemporary health communication, the pharmaceutical leaflet (PL) occupies a critical position but often undertheorized position. This means the pharmaceutical leaflet plays a vital, high-stakes role in health communication. It is often the *only direct written link* between a drug manufacturer and the user. It tells patients and users what a drug does, how to take it, what risks and side effects to expect, and what to avoid.

Thus, linguists, health communication scholars, and discourse analysts have not sufficiently examined how PLs are written, structured, or understood. There are a few robust theories explaining how patients actually process, interpret, or are misled by PL language. Moreover, there are questions about genre conventions, power dynamics,

literacy assumptions, legal vs. patient-friendly language tensions, and readability that have received scattered rather than systematic theoretical attention. Finally, the PL sits awkwardly between legal document, medical text, and public communication, and this hybrid identity has rarely been theorized as its own distinct communicative genre. This gap makes it difficult to design leaflets that patients genuinely understand, evaluate whether existing leaflets succeed or fail communicatively, critique the power imbalance embedded in how pharmaceutical information is presented, and reform regulatory standards for drug information documents. Designed as the primary written interface between pharmaceutical companies and drug users, PLs have a dual mandate: to inform patients about drug administration and to protect the commercial and legal interests of their producers. Patients and users increasingly expect health information to be directed at them personally and written in a manner that is both accurate and comprehensible (Askehave and Zethsen, 2010). Yet research consistently demonstrates that PLs remain linguistically complex and difficult for lay readers to understand, a condition that directly contradicts the genre's stated purpose (Zethsen and Askehave, 2010). The legal framework governing PLs is unambiguous on this point. Article 63(2) of EU Directive 2001/83/EC mandates that PLs must be 'written and designed to be clear, understandable and enable the users to act appropriately' (European Parliament and of the Council, 2001). Pharmaceutical leaflets were first institutionalised across Europe under Council Directive 92/27/EEC in 1992 and became fully mandatory in 1999 (Council of the European Communities, 1992). A growing body of research attests that, despite this legal requirement, PLs continue to exhibit features of specialist, inaccessible discourse, dense technical vocabulary, complex syntactic constructions.

This study focuses on one pervasive but underexplored feature of PL discourse. Imperatives are the grammatical backbone of PLs, constituting the primary mode through which pharmaceutical companies instruct, warn, prohibit, and advise drug users. Yet prior research has concentrated almost exclusively on lexical complexity and readability, neglecting the ideological functions that imperative structures serve. This gap is the problem this study addresses. An inherent and irresolvable dialectical tension inhabits the core of pharmaceutical communication: PLs are legally required to empower lay users with clear, actionable information, yet the language through which this information is delivered, particularly the imperative, simultaneously enacts and reproduces asymmetrical power relations between pharmaceutical producers and drug consumers. When a leaflet instructs 'Do not exceed the stated dose' or 'Store in a cool dry place,' it does more than convey information; it positions the reader as a subject who must comply, under the institutional authority of the pharmaceutical company.

Several studies have examined key dimensions of pharmaceutical leaflets (PLs) from varying theoretical standpoints, though each remains confined within descriptive or functional paradigms that fall short of a fully critical analytical engagement. With respect to linguistic complexity, scholars have interrogated the readability and comprehensibility of PL language, questioning whether such texts are genuinely accessible to lay patients (Zethsen and Askehave, 2010; Pander Maat and Lentz, 2010; Gustafsson, 1975). These studies, drawing broadly on linguistic complexity frameworks and readability metrics, reveal a persistent gap between the technical register of PL discourse and the comprehension capacities of its intended audience, yet they treat this gap primarily as a communicative problem rather than a structural or ideological one. A second strand of inquiry has applied genre theory to the organizational and structural architecture of PLs, mapping their staged, conventionalized sequences as recognizable institutional text types (Bhatia, 1993; Swales, 1990). While this body of work illuminates how PLs conform to and reproduce recognizable generic conventions, it remains largely concerned with formal description and stops short of interrogating the power relations that such generic structures encode and naturalize. A third area of scholarship has approached PLs through the lens of health communication and behavioral research, establishing empirical links between deficient PL comprehension and measurable failures in medication adherence (Haynes et al., 2008; WHO, 2003; Ley, 1988; Nutbeam, 2000). Though clinically significant, this orientation frames the PL instrumentally, as a vehicle for behavioral compliance, and consequently overlooks the broader discursive conditions under which patient subjectivity is constructed and institutional authority is reproduced.

It is precisely this overlooked dimension, the discursive construction of institutional authority and the ideological legitimation of asymmetrical power relations in health communication contexts, that a growing body of critical scholarship has begun to foreground, though not yet systematically in relation to PL discourse specifically. Komulainen et al. (2025), in their analysis of legitimizing strategies in healthcare organizational contexts, demonstrate that institutional meaning-making is never a neutral process but is actively constituted through discursive practices that naturalize particular configurations of authority, governance, and organizational change as self-evidently rational and necessary. Their concept of legitimizing strategies is directly pertinent to the present study's analytical concerns: the imperative constructions that structure PL discourse function, as this study argues, as precisely such legitimizing mechanisms, encoding pharmaceutical institutional authority as transparent, disinterested, and scientifically grounded while simultaneously foreclosing the patient's discursive space for negotiation or resistance. Similarly, recent critical discourse work on health communication in digital and commercial contexts has

demonstrated the ideological productivity of promotional and instructional language in constructing particular kinds of health subjects. Rad and Melendez-Torres (2025), in their critical discourse analysis of social media advertisements for GLP-1 receptor agonist weight loss drugs, reveal how health communication discourse strategically positions patients as autonomous consumers while simultaneously reproducing pharmaceutical institutional authority and shaping public perceptions of medical intervention in ways that serve commercial and institutional interests. Though operating in a different generic context, their findings resonate significantly with the present study's demonstration that PL imperatives construct a patient subject who experiences institutional compliance as personal rational agency.

The theoretical and methodological foundations for this critical orientation are further consolidated by Brookes (2026), whose comprehensive mapping of Critical Discourse Studies and health communication establishes the analytical framework within which the present study situates itself. Brookes argues that health communication genres, including, but not limited to, clinical consultations, public health campaigns, pharmaceutical advertising, and patient information documents, constitute primary sites for the discursive production and reproduction of power, knowledge, and subjectivity, and that Critical Discourse Analysis provides the most theoretically rigorous apparatus available for excavating the ideological operations embedded within such genres. This position directly underwrites the present study's treatment of the PL not merely as a communicative artifact but as a discursive site in which relations of power, knowledge, and social control are actively produced and legitimized. The utility of discourse analysis as an instrument for revealing the ideological architecture of ostensibly neutral institutional texts is further illustrated by Jahrir et al. (2025), whose examination of commercial mineral water advertisements demonstrates how even apparently mundane promotional discourse deploys carefully structured linguistic elements to construct particular subject positions, naturalize consumption practices, and reproduce institutional authority as common sense. The analytical logic underlying their study, that discourse analysis can render visible the ideological work performed by texts that present themselves as transparent and factual, is directly applicable to the PL genre, which similarly deploys an authoritative, clinically neutral register to conceal the institutional interests and power asymmetries that its linguistic choices encode.

Taken together, these three original strands of inquiry, supplemented by this emerging critical scholarship, share a constitutive theoretical blind spot in their treatment of PLs specifically: they ask whether PLs communicate effectively, but none interrogates the ideological work that PL language performs. Specifically, the ideological dimensions of imperative use in PLs, the question of how imperative constructions serve as instruments of institutional power, epistemic authority, and social control, remain largely unexplored in the discourse analysis literature. Previous frameworks, drawn from linguistics, genre studies, and health science, respectively, describe what PLs do linguistically but systematically fail to ask whose interests that language serves, how the patient is discursively positioned as a subject of institutional governance, and what power asymmetries are encoded in the grammatical choices that structure these texts. While the critical scholarship of Brookes (2026), Rad and Melendez-Torres (2025), Komulainen et al. (2025), and Jahrir et al. (2025) collectively establishes the theoretical legitimacy and analytical productivity of applying critical discourse frameworks to health communication genres, none of these studies addresses the specific ideological functions of imperative syntax within pharmaceutical patient information documents. This study directly addresses that remaining gap, situating the structural analysis of imperatives within a broader critical discourse framework and treating the PL not merely as a communicative artifact but as a discursive site in which relations of power, knowledge, and social control are actively produced and legitimized.

The study is guided by two research questions:

• What structural types of imperatives are commonly used in pharmaceutical leaflets?
• What are the ideological implications of the use of such imperatives in pharmaceutical leaflets?

LITERATURE REVIEW

Language, meaning and ideology

Language study is a means of understanding how society functions (Thompson, 1994). Uncovering the social functions of language entails interpreting meaning within its social context. Halliday (1985) asserts that language can only be explained as the realisation of meanings inherent in the social system. Central to this social reading of language is the concept of ideology, broadly understood as 'how meaning serves to sustain asymmetrical relations of power' (Thompson, 1984, p. 4).

Ideology as a theoretical concept occupies a complex and contested terrain. Althusser (1971) argues that ideology operates through language: it is through discourse that individuals are 'interpellated' as subjects, recruited into subject positions that make asymmetrical social relations appear natural, obvious, and of their own making. The strength of ideological control, for Althusser, lies precisely in the fact that subjects regard themselves as the origin of meaning, not its product. Extending this argument, Deetz (1992) cautions that ideological processes are subtle and complex, operating through 'hidden-forgotten discourses' (Thompson, 1984) and common-sense knowledge that naturalises what is in fact

socially constructed. Foucault's (1982) complementary account foregrounds the self-disciplining dimension of power, wherein subjects internalise normative demands and regulate their own behaviour, a dynamic particularly relevant to health discourse, where compliance is framed as both rational and self-interested.

Critical discourse analysis and pharmaceutical texts

The theoretical framework of Critical Discourse Analysis (CDA) provides the analytical lens through which this study approaches imperative discourse in PLs. Fairclough (1992) defines discourse as a form of social practice using language ideologically invested within specific social and institutional settings. Crucially, Fairclough situates discourse within processes of production, distribution, and consumption, insisting that meaningful analysis must attend to discursive practices as well as to texts. van Dijk (2001) similarly conceptualises ideology as the basis of the social representations of a group, arguing that ideologies organise schematic social attitudes and are enacted and reproduced through discourse.

Applied to the PL as a genre, this CDA orientation raises a productive analytic question about the interests PL discourse serve, and through what linguistic mechanisms? Edu-Buandoh and Ahialey (2012) demonstrate a comparable ideological dynamics in Ghanaian courtroom cross-examination, showing that questions are used to coerce witnesses into positions they would otherwise not accept. The present study extends this logic to the pharmaceutical domain, to argue that imperatives function as analogous ideological instruments, presupposing compliance, constructing patient-subjects, and naturalising pharmaceutical authority.

A substantial body of empirical work has established that PLs are linguistically problematic for lay comprehension. A UK study reported that up to 50% of patients on long-term medications do not take them as prescribed, a finding linked in part to the misunderstanding of prescription instructions and limited health literacy (Haynes et al., 2008). Askehave and Zethsen (2010) examined Danish pharmaceutical companies' use of discourse analysis in PL production and found that systematic engagement with discourse analysis tools was largely absent from professional practice. A second strand of inquiry has applied genre theory to the organizational and structural architecture of PLs (Bhatia, 1993; Swales, 1990). Despite this body of work, a significant gap remains that none of the existing studies systematically analyzes the ideological implications of imperative constructions as the dominant sentence type in PLs. The present study fills this gap by applying CDA and van Dijk's (2001) framework to examine not only the structural typology of imperatives in PLs but the ideological work those structures perform.

THEORETICAL FRAMEWORK

van Dijk's ideological discourse analysis

This study adopts van Dijk's (2001) framework of ideological discourse analysis as its primary theoretical orientation. van Dijk argues that ideologies function as the basis of the social representations of groups, organising schematic general opinions about relevant social issues (Eagly and Chaiken, 1993). Crucially, ideologies are not merely cognitive structures; they are enacted, reproduced, and challenged through discourse. In van Dijk's model, the analysis of ideological discourse proceeds across three interrelated levels:

- Textual analysis: examination of the surface structure of texts, vocabulary choice, sentence structure, the distribution of syntactic types (imperative, declarative, interrogative).
- Linguistic analysis: attention to grammatical and pragmatic features, modality, epistemic stance, pronoun use, and the functional loading of specific constructions.
- Social and contextual analysis: situating textual and linguistic findings within the broader social contexts of power, institutional identity, and group relations.

Applied to PLs, this tripartite framework enables the analyst to move from the description of imperative structures to the interpretation of their functional and pragmatic properties, to the critical explanation of the ideological work they perform within the pharmaceutical-consumer relationship.

Fairclough's three-dimensional model

Fairclough's (1992) three-dimensional model of discourse, which analyses discourse simultaneously as text, discursive practice, and social practice, complements van Dijk's framework by foregrounding the institutional and social dimensions of PL production and consumption. PLs are produced within specific institutional contexts (pharmaceutical companies operating under EU or national regulatory frameworks), distributed through specific channels (pharmacies, medical clinics), and consumed by lay readers with varying degrees of health literacy. The ideological implications of imperative use in PLs cannot be fully understood without situating them within these production and consumption contexts. Fairclough's model ensures that the analysis remains sensitive to these multi-layered dynamics.

While CDA provides the opportunity for a consideration of the ideological implications of the use of imperative in PLs, van Dijk's Ideological Discourse Analysis helps in the analysis of the textual and linguistic features of the

imperatives in PLs. Hence, CDA serves as the theoretical framework for this study, while van Dijk's Ideological Discourse Analysis serves as an analytical framework for the study.

RESEARCH METHODS

Research design

This study is situated within a qualitative research paradigm and adopts a descriptive-interpretive design operationalised through Critical Discourse Analysis (CDA). The choice of a qualitative design is epistemologically motivated by the nature of the research problem. Understanding the ideological implications of imperative structures in PLs is fundamentally an interpretive task that cannot be reduced to quantitative frequency counts alone. As Cohen, Manion, and Morrison (2018) note, qualitative descriptive designs enable thorough description, analysis, and interpretation of phenomena as they naturally occur, making them well-suited to the fine-grained textual analysis this study requires.

CDA was selected as the methodological framework, rather than, for instance, corpus linguistics or content analysis, because it explicitly positions linguistic analysis within a critical engagement with social relations of power. The CDA tradition, as exemplified by Fairclough (1992) and van Dijk (2001), treats language not as a neutral medium of information exchange but as a social practice shaped and constitutive social relations, identities, and ideological formations. This critical orientation is essential for a study that seeks not merely to describe the distribution of imperatives in PLs, but to interrogate what ideological interests and power relations those imperatives serve.

Corpus description and data sources

The corpus for this study comprises five purposively selected pharmaceutical leaflets (PLs), drawn from pharmaceutical companies operating in Ghana and internationally. The rationale for selecting five leaflets, rather than a larger corpus, reflects the imperative of depth over breadth. That is the study's CDA framework demands close, contextually sensitive reading of each text rather than surface-level pattern matching across a large dataset. Table 1 provides a full overview of the corpus.

Table 1. Corpus overview, pharmaceutical leaflets analysed.

Code	Pharmaceutical company	Country of origin	Medicine type	Target user	Word count
PL1	Seven Seas Limited	UK	Nutritional supplement	Adult	~310
PL2	Ernest Chemist Limited	Ghana	Antibiotic	Adult/Child	~290
PL3	Ciron Drugs & Pharmaceutical Pvt Ltd	India	Anti-fungal	Adult	~340
PL4	Amposah-Effah Pharmaceutical Ltd	Ghana	Anti-inflammatory	Adult	~280
PL5	Unidentified Local Company	Ghana	Analgesic	Adult/Child	~260
Total	5 leaflets	3 countries	5 drug types		~1,480

Source: Pharmaceutical companies identified in the data; codes assigned by the researcher for analytical purposes.

Sampling strategy

The five PLs were selected using purposive sampling (Cohen, Manion and Morrison, 2018), a non-probability strategy in which cases are deliberately chosen for their theoretical relevance and informational richness. The specific criteria guiding selection were based on genre relevance, which is that all leaflets must belong unambiguously to the PL genre, accompanying a specific medicinal product. It also considered linguistic richness, where leaflets must contain sufficient imperative density to support analysis across multiple structural types. Again, contextual diversity was considered. That is, the leaflets were selected from both Ghanaian (local) and international (foreign) pharmaceutical companies to allow for potential cross-contextual observations. There was a consideration for age range, where both adult and paediatric leaflets were included, since the study focuses on PL imperative use in general rather than on age- or gender-specific linguistic variation.

Analytical technique: Critical discourse analysis

The analytical procedure followed van Dijk's (2001) three-level framework as operationalised in two stages. In Stage 1 (Textual Analysis), the five PLs were read systematically to identify all sentence types: imperative and declarative. Each imperative was then classified by structural type according to the following criteria: the presence or absence of negation (positive vs. negative), and the presence or absence of a dependent clause (simple vs. complex). This yielded the four-fold typology of PCI, PSI, NCI, and NSI. The criteria in Table 2 formally distinguish simple from complex imperatives.

Table 2. Operationalised distinguishing criteria.

Criterion	Simple Imperative	Complex imperative
Syntactic structure	Single main clause only	Main clause + one or more subordinate clauses
Conditionality	Unconditional	Conditional (*if, unless, when, provided that*)
Temporal qualification	Absent	Present (*when, before, after, until*)
Causal/concessive elaboration	Absent	Present (*because, although, since*)
Semantic completeness	Self-contained	Requires a qualifying clause for full meaning
Illocutionary force	Maximum/absolute	Modulated / circumstantial
Applicability	Universal/context-free	Restricted to stated conditions
Clause count	One	Two or more

A **simple imperative** is a directive construction in its most reduced, unconditional form. It consists fundamentally of a **bare infinitive verb** directed at an implied second-person subject (*you*), with no qualifying, conditional, or subordinate clausal material attached. A **complex imperative, on the other hand,** is a directive construction in which the core imperative clause is **syntactically and semantically elaborated** through the attachment of one or more subordinate, conditional, temporal, or qualifying clauses. The directive is therefore **contingent**; it applies only under specified circumstances or is modified by additional propositional content.

In Stage 2 (Linguistic and Ideological Analysis), each structural type was examined for its functional and pragmatic properties, drawing on Austin's (1962) and Searle's (1969) framework of speech acts, specifically the distinction between illocutionary force (the social act performed by an utterance: directing, warning, prohibiting, advising) and perlocutionary effect (the impact on the addressee). Condoravdi and Lauer's (2011) taxonomy of imperative functions: directives, wish-types, permissions and invitations, and disinterested advice, provided a further interpretive resource. Modal auxiliaries within imperative constructions were identified and classified by frequency and function, with particular attention to *should* and *may*, the two most frequently occurring modals, and to their respective ideological implications.

Inter-rater reliability check or reflexivity

In the first stage of the analysis, the textual reading of, the five PLs were read systematically and exhaustively done to identify all sentence types, classified as either imperative or declarative. Each identified imperative was subsequently subjected to structural classification according to two operationalised binary criteria: the presence or absence of negation, yielding the positive/negative distinction, and the presence or absence of a dependent clause, leading to the simple/complex distinction. The intersection of these two criteria produced the four-fold typology of Positive Complex Imperative (PCI), Positive Simple Imperative (PSI), Negative Complex Imperative (NCI), and Negative Simple Imperative (NSI).

To strengthen the credibility and replicability of this classificatory procedure, an inter-rater reliability check was conducted. A second independent rater, trained in basic syntactic analysis, was provided with the operationalised classification criteria and asked to categorise a randomly selected sub-corpus of 40 imperatives, representing approximately 24% of the total imperative count. Agreement between the primary analysts and the independent rater was calculated using Cohen's Kappa (κ), yielding a coefficient of $\kappa = .87$, which falls within the range conventionally interpreted as strong agreement (Landis and Koch, 1977). Instances of disagreement, which clustered primarily around borderline cases involving elliptical dependent clauses, were resolved through adjudication and used to refine the classificatory criteria before the full analysis. This process not only enhances the methodological transparency of the typology but also confirms that the distinctions drawn between structural categories are sufficiently robust to sustain independent replication.

Regarding the second stage, which is the linguistic and ideological analysis, each structural type identified in complementary and more granular interpretive resource for distinguishing the pragmatic register of individual imperative tokens. Modal auxiliaries occurring within imperative constructions were further identified, catalogued by frequency, and analysed by semantic function, with particular analytical attention directed toward *should* and *may* as the two most frequently occurring modals, and toward their respective ideological implications for the construction of epistemic authority and patient subjectivity.

Given that the ideological dimension of Stage 2 necessarily involves interpretive judgment rather than purely formal classification, a reflexivity statement is warranted. The analysts acknowledge that the attribution of ideological function to particular linguistic structures is an interpretive act, shaped by theoretical commitments to Critical Discourse Analysis and its foundational premise that language is never ideologically neutral. To mitigate the risk of confirmation bias, analytical claims were

systematically grounded in textual evidence, with ideological readings derived inductively from patterns of linguistic frequency and co-occurrence rather than imposed deductively onto individual instances. Where interpretive uncertainty arose, alternative readings were considered and, where appropriate, acknowledged within the analysis. This reflexive orientation does not diminish the validity of the ideological findings but rather situates them within an epistemologically transparent framework consistent with the qualitative critical tradition in which this study is located.

ANALYSIS

Sentence type distribution in pharmaceutical leaflets

A comprehensive reading of the five PLs yielded a total of 239 sentences. These sentences were classified into two broad functional types: imperatives and declaratives. Table 3 presents the full distribution of sentence types across the corpus.

Table 3. Distribution of sentence types in pharmaceutical leaflets (N = 239).

Sentence type	Count	Percentage	Primary role
Imperatives (Total)	164	68.62%	Directives, commands, warnings, advice
Positive Complex Imperative (PCI)	~40	~16.7%	Conditional advice
Negative Complex Imperative (NCI)	~79	~47.17% of imperatives	Conditional warnings/prohibitions
Positive Simple Imperative (PSI)	~18	~8% of imperatives	Direct commands
Negative Simple Imperative (NSI)	~46	~28% of imperatives	Absolute prohibitions
Declaratives (Total)	75	31.38%	Information, explanation, context
Total	**239**	**100%**	

Source: Corpus analysis of five pharmaceutical leaflets.

As Table 3 demonstrates, imperatives overwhelmingly dominate PL genre, constituting 68.62% of all sentences in the corpus. This numerical dominance is itself ideologically significant: it reflects the fundamentally directive orientation of PLs as a genre. Pharmaceutical companies do not primarily seek to explain or inform; they seek to direct, command, warn, and prohibit. The remaining 31.38% of sentences are declaratives, providing the contextual, explanatory, and factual background against which imperatives operate. The distribution of imperative types reveals that Negative Complex Imperatives (NCI) are the most prevalent, accounting for approximately 48.17% of all imperatives. This finding is particularly interesting from an ideological standpoint: the dominance of NCIs indicates that pharmaceutical producers devote the greatest proportion of their directive effort to conditional warnings and prohibitions, constructions that enact authority through the dual mechanism of negation (prohibition) and subordination (contextual condition).

Structural typology of imperatives

The four structural types of imperatives identified in the corpus are presented in Table 4, along with their structural features and primary ideological functions.

Table 4. Structural typology of imperatives in pharmaceutical leaflets.

Imperative type	Structural feature	Ideological function
Positive Complex Imperative (PCI)	Imperative clause preceded/followed by a subordinate adverbial clause (condition or purpose)	Advice; guides users under specific felicitous conditions
Positive Simple Imperative (PSI)	Single imperative clause; no dependent clause; verb-initial	Command; assertion of pharmaceutical authority and power
Negative Complex Imperative (NCI)	Negated imperative with subordinate adverbial clause	Conditional warning/prohibition; empowers users with contextual premise
Negative Simple Imperative (NSI)	Negated imperative; do not + bare infinitive; no dependent clause	Absolute prohibition; maximum institutional authority

Source: Adapted from corpus analysis; ideological functions analysed via van Dijk (2001) and Condoravdi and Lauer (2011).

Analysis of imperative types

Positive complex imperative (PCI)

The Positive Complex Imperative is characterised by an imperative clause, carrying no negation and thus maintaining positive illocutionary force, accompanied by one or more dependent clauses. These dependent clauses typically take the form of adverbial clauses of condition (introduced by 'if') or purpose (introduced by 'so that'). The following instances exemplify this type:

If you take more of this product than you should, speak to your doctor or pharmacist straight away.
Tell your doctor or pharmacist if you have any of these conditions…
If you accidentally take too much Dicloflex, tell your doctor or go to your nearest hospital casualty department immediately.
Take your medicine pack with you so that people can see what you have taken.

In each of these instances, the directive (the imperative clause proper) is embedded within a conditional or purposive frame. The conditional premise, 'if you take more than you should'; 'if you have any of these conditions', functions as a felicity condition: the advice or instruction is rendered relevant and applicable only if the stated condition obtains. This structure performs a dual ideological function. On one hand, it positions the pharmaceutical company as a knowledgeable advisor who anticipates a range of patient scenarios and provides tailored, contextualised guidance. On the other hand, by making compliance conditional on a patient-identified premise, it constructs an advisory relationship rather than an authoritarian one, softening the coercive dimension of the directive by framing it as situation-specific advice rather than unconditional command.

Positive simple imperative (PSI)

The Positive Simple Imperative consists of a single imperative clause without any dependent clause. It is verb-initial, carries no negation, and is syntactically maximally stripped down. Consider the following:

Store in cool dry place.
Protect from sunlight.
Keep medicine out of reach of children.
Shake the bottle to loosen granules.

Unlike the PCI, the PSI offers no conditional frame, no explanatory context, and no felicity premise. The patient is issued a command without justification or condition: they are expected to comply simply because the pharmaceutical company has instructed them to do so. Potner (2003) characterises this use as a 'TO-DO list', a genre of instruction that presupposes compliance and constructs the reader as an obedient subject. Ideologically, the PSI is the most unambiguously authoritarian of the four types: it maximally foregrounds pharmaceutical power and minimally acknowledges patient agency.

Negative complex imperative (NCI)

The Negative Complex Imperative combines negation (the marker 'not' or 'don't') with a dependent clause, producing a conditional prohibition or warning. Corpus instances include:

If you miss a dose, don't worry; do not take a double dose.
Do not take Seven Seas Cod Liver Oil if you know you are allergic to any of the ingredients of this product.
Do not use Dicloflex tablets if they have expired.

The NCI is the most frequently occurring imperative type in the corpus (approximately 48% of all imperatives). This prevalence reflects the centrality of risk management and liability mitigation in pharmaceutical communication. By attaching a conditional clause to the prohibition, 'do not take X if Y', pharmaceutical companies simultaneously warn patients against dangerous actions and justify those warnings by specifying the conditions under which they apply. The ideological function is twofold: to protect patients from harm (the patient-centred rationale) and to protect the company from legal liability (the producer-centred rationale). The conditional structure, by providing a logical premise for the prohibition, makes compliance more cognitively tractable and positions the pharmaceutical company as a rational, protective authority rather than an arbitrary one.

Negative simple imperative (NSI)

The Negative Simple Imperative is structurally the inverse of the PSI: it combines negation with a bare imperative clause, producing an absolute prohibition. Examples from the corpus are:

Do not exceed the stated dose.
Do not store above 25 degrees Celsius.
Do not take a double dose.
Do not pass it on to others.

The NSI is ideologically the most coercive of the four types. Like the PSI, it strips away conditional framing and justification; unlike the PSI, it adds negation, transforming advice or instruction into prohibition. The patient is told unambiguously what they must not do, with no contextual

qualification. van Dijk's (2006) conceptualisation of social power, as the control exercised by one group over the actions and minds of another, is maximally operative here. The NSI does not negotiate, advise, or explain; it prohibits, and in doing so, it enacts the pharmaceutical company's institutional authority in its most direct form.

Modality and imperatives

Beyond the four structural types, the corpus reveals a significant proportion of imperatives augmented by modal auxiliaries. Table 5 presents the frequency and functional distribution of modal auxiliaries in the corpus.

Table 5. Frequency of all modals, function, and ideological implication of modal auxiliaries in pharmaceutical leaflets.

Modal auxiliary	Frequency (%)	Primary function in PLs	Ideological implication
Should	43%	Obligation; prescriptive instruction	Depersonalises responsibility; enjoins all parties, not just the patient
May	32%	Epistemic possibility; tentativeness	Hedges uncertain claims; protects pharmaceutical credibility
Can	15%	Ability/theoretical possibility	Signals drug-specific capability; maintains authority
Must	10%	Necessity; obligatory compliance	Strongest obligation marker; non-negotiable directive

Source: Corpus analysis of modal auxiliaries in five pharmaceutical leaflets.

The frequency percentages in Table 5 were based on the total number of modals in the PLs. The modal auxiliary *should* is the most frequently deployed (43%), consistently used in passive constructions of the type should be + past participle:

Examples with 'should':

Fluxaacin suspension should be stored at 25 degrees Celsius.
It should be taken at least 30 minutes before meals.
Women should not become pregnant during or within one month of treatment with griseofulvin.

The use of should in these constructions serves a distinctive ideological function: by deploying the passive voice alongside the obligation modal, pharmaceutical writers depersonalise the subject of the obligation. The instruction is not directed at 'you the patient' but at a generalised, impersonal subject, the drug itself or a set of actions. This grammatical depersonalisation extends the scope of the obligation beyond the individual patient to encompass anyone who handles the medicine including the pharmacist, carer, or family member. The effect is to universalise pharmaceutical authority across all persons who interact with the drug, not merely those who consume it. The second most frequent modal, may (32%), functions as a marker of epistemic possibility and tentativeness, as in:

Examples with 'may':

Up to twelve months may be required for infections involving nails.
Griseofulvin may falsely elevate urinary levels of Vanillin Mandelic Acid.
In severe conditions, up to twice this amount may be given for a short time.

The modal may in these instances is ideologically strategic: it hedges claims in domains where pharmaceutical companies are not able to guarantee certainty, where drug effects are variable, patient responses are unpredictable, or outcomes are genuinely probabilistic. By using may rather than will or must, pharmaceutical writers reduce the propositional force of their claims, protecting themselves from legal liability in cases where the stated outcome does not obtain. Schwager (2006) describes this as sentence radical mood, the use of modal inflection to modulate the degree of commitment to a proposition. In pharmaceutical discourse, this modulation serves a dual protective function: it protects patients from being misled, and it protects companies from being held accountable for outcomes they cannot guarantee.

DISCUSSION

The findings of this study provide robust empirical support for the theoretical claim that imperative discourse in PLs is not ideologically neutral. The overwhelming dominance of imperatives (68.62% of all sentences) and their internal distribution across four structural types reflect a carefully calibrated exercise of pharmaceutical authority over patient conduct. This finding is consistent with van Dijk's (2001) conceptualisation of ideology as enacted through discourse: the PL is a site where the social representations

of the pharmaceutical company, as the expert, the guardian of public safety, the legally mandated communicator, are reproduced and naturalised through specific linguistic choices. The analysis demonstrates that different structural types of imperative perform distinct ideological functions within this broader exercise of authority. The PSI and NSI, the simple types, enact authority in its most direct and unilateral form: they command and prohibit without qualification, presupposing compliance and leaving no room for patient negotiation. The PCI and NCI, the complex types, enact authority in a more dialogic mode, embedding commands and warnings within conditional frames that acknowledge the variability of patient circumstances and provide logical premises for compliance. Together, these four types constitute an ideologically layered discourse repertoire that pharmaceutical companies deploy to manage the complex relationship between institutional authority and patient agency.

The ideological implications of imperative use in PLs are inseparable from the power-knowledge dynamics that structure the pharmaceutical-consumer relationship. Owusu-Ansah (1992) defines power as the ability of a person or group to influence the actions of another in pursuit of the will and goals of the other. The pharmaceutical company's use of imperatives, particularly the PSI and NSI, is a paradigmatic exercise of this kind of power. The company's knowledge of pharmacology, toxicology, and clinical outcomes is translated into linguistic authority over patient behaviour, and the patient-subject is constituted as one who must comply with pharmaceutical orders to ensure their own safety. Foucault's (1982) concept of self-disciplining power is also illuminating here. When patients read and internalise the imperatives of a PL, adjusting their storage practices, dosing schedules, and dietary habits in accordance with pharmaceutical instructions, they engage in a form of self-governance that serves both their own interests and those of the pharmaceutical company. The PL's imperatives do not simply command from outside; they are designed to be internalised, to become part of the patient's own practical rationality. In this sense, the ideological power of the PL is most effective precisely when it is least visible, when patients experience compliance as natural, rational, and self-chosen.

For example, Althusser (1971) argues that ideology operates through language and discourse that individuals are 'interpellated' as subjects, recruited into subject positions that make asymmetrical social relations appear natural, obvious, and of their own making. Ideology as a theoretical concept occupies a complex and contested terrain. Althusser (1971) argues that ideology operates through language: it is through discourse that individuals are 'interpellated' as subjects, recruited into subject positions that make asymmetrical social relations appear natural, obvious, and inevitably of their own making. This process of interpellation is, crucially, not experienced as coercion but as recognition; the ideological subject does not feel commanded but rather addressed, not dominated but rather informed. It is precisely this quality of naturalisation, the capacity of ideology to render its own operations invisible, that constitutes its most formidable political and epistemological achievement.

This theoretical insight acquires particular analytical force when applied to the discourse of pharmaceutical leaflets. Althusser distinguishes between Repressive State Apparatuses (RSAs), which secure ideological conformity through overt coercion, law enforcement, judicial sanction, and physical constraint, and Ideological State Apparatuses (ISAs), which secure conformity through the softer, more pervasive mechanisms of discourse, ritual, and symbolic practice. Educational institutions, religious organisations, media systems, and, crucially for the present study, medical and pharmaceutical institutions function as ISAs precisely because they exercise power not through visible compulsion but through the quiet, authoritative interpellation of subjects who come to experience institutional directives as self-evident common sense rather than as expressions of asymmetrical power relations. The pharmaceutical leaflet, as a textual emanation of the pharmaceutical ISA, participates in this broader ideological apparatus which it addresses the patient not as a subordinate subject receiving commands from a position of institutional dominance, but as a responsible, autonomous individual receiving neutral, scientifically grounded guidance for their own benefit.

It is within this Althusserian framework that the phrase *the ideological power of the PL is most effective precisely when it is least visible* achieves its fullest theoretical significance. The ideological operation of the PL does not announce itself as such. Imperative constructions, such as *take one tablet daily*, *do not exceed the stated dose*, *consult your doctor if symptoms persist*, present themselves not as exercises of institutional authority but as transparent, disinterested transmissions of medical fact. The grammatical form of the imperative, stripped of explicit markers of agency, erases the institutional subject who issues the directive, producing what Althusser would recognise as a characteristically ideological effect: the naturalisation of a historically contingent power relation as an objective, universal, and self-evidently reasonable instruction. The patient who complies with a PL imperative does not typically experience that compliance as submission to pharmaceutical institutional power; they experience it as the rational, responsible management of their own health. This is precisely the interpellative achievement that Althusser's framework illuminates: the subject produced by the PL is one who freely chooses to enact the behaviour the institution requires, and who experiences that enactment as an expression of personal agency rather than institutional compliance.

The invisibility of this ideological operation is further secured by what Althusser (1971) terms the *obviousness* of ideology, its capacity to make its categories and

imperatives appear not as historically produced and institutionally interested, but as simply true, simply rational, simply how things are. When a PL instructs a patient to *store below 25°C* or *keep out of reach of children*, the directive presents itself as a straightforward, technically motivated instruction requiring no further interrogation. Yet embedded within such apparently neutral directives is a complex architecture of institutional authority: the pharmaceutical company as the legitimate arbiter of drug management practices, the patient as a potentially incompetent or irresponsible agent requiring external regulation, and biomedical knowledge as the self-evidently correct framework within which health decisions should be made. These ideological presuppositions are not stated but structurally encoded; they operate, in Althusser's terms, behind the back of the subject, precisely because their effectiveness depends upon their remaining unrecognised as ideology at all.

The analysis of modal auxiliaries reveals an important qualification of the picture of unilateral pharmaceutical authority drawn above. The frequent use of may (32%) as an epistemic hedge indicates that pharmaceutical authority is not absolute or omniscient. In areas of genuine pharmacological uncertainty regarding variable drug effects, unpredictable patient responses, probabilistic outcomes, pharmaceutical companies strategically reduce the propositional force of their claims, protecting themselves from the charge of misrepresentation. This hedging strategy is consistent with Fairclough's (1992) observation that ideological discourse is not monolithic: it contains internal tensions and contradictions that reflect the real limits of institutional knowledge and power. The contrast between should (obligation, certainty) and may (possibility, tentativeness) in the same document is thus ideologically significant. The pharmaceutical company presents itself simultaneously as the authoritative expert (who should be obeyed) and the epistemically responsible communicator (who acknowledges what may happen but cannot be guaranteed). This dual positioning is a sophisticated discursive strategy for managing the tension between the demands of consumer trust and the realities of pharmacological uncertainty.

The Ghanaian context regarding the ideological implications of imperatives in PLs

The inclusion of PLs produced by Ghanaian pharmaceutical companies, specifically Ernest Chemist Limited and Amposah-Effah Pharmaceutical Limited, in the present corpus introduces a contextual layer of considerable analytical and practical significance that warrants dedicated elaboration. The PL as a genre has been shaped overwhelmingly by European regulatory architecture, most notably the template established by the European Medicines Agency (EMA) and codified in Directive 2001/83/EC of the European Parliament, which mandates specific structural, linguistic, and informational conventions for patient-facing pharmaceutical documentation. These conventions presuppose a particular kind of reader: one who is literate in the language of the leaflet, possesses a baseline of health literacy sufficient to contextualise clinical information, and operates within a healthcare system that provides accessible professional medical guidance as a complementary resource. The extent to which these presuppositions hold in the Ghanaian context is, at best, deeply uncertain, and this uncertainty has profound implications for how the ideological dynamics of imperative use in PLs are received, interpreted, and acted upon by Ghanaian patients.

Ghana presents a complex and internally differentiated health communication landscape. While the country has made measurable progress in expanding access to formal education and healthcare infrastructure since independence, significant disparities persist along lines of geography, socioeconomic status, gender, and ethnicity. The Ghana Health Service has consistently identified health literacy as a critical public health challenge, noting that large segments of the population, particularly in rural and peri-urban areas, lack the functional literacy and health-specific knowledge necessary to engage critically with written pharmaceutical information (Ghana Health Service, 2020). This deficit is compounded by the linguistic complexity of the Ghanaian sociolinguistic environment: with over 80 documented languages and a colonial linguistic legacy that positions English as the official medium of formal communication, PLs produced in English, as is predominantly the case even for locally manufactured pharmaceuticals, are effectively inaccessible in their written form to a substantial portion of their intended readership. The ideological consequences of this inaccessibility are significant: when a patient cannot read or adequately comprehend a PL, the institutional power encoded in its imperative constructions is not neutralised but rather displaced onto other mediating agents, pharmacists, healthcare workers, family members, or traditional healers, whose own interpretive frameworks may further transform, distort, or selectively transmit the pharmaceutical directives in question.

This situation acquires additional gravity when considered against the backdrop of Ghana's broader healthcare infrastructure. Unlike the European context, in which PL comprehension difficulties are partially mitigated by ready access to general practitioners, specialist consultants, and community pharmacists operating within a regulated advisory capacity, the Ghanaian healthcare environment is characterised by chronic understaffing, uneven geographic distribution of medical facilities, and significant financial barriers to professional consultation (World Health Organization, 2022). For many Ghanaian patients, particularly those in rural communities or lower socioeconomic brackets, the pharmaceutical leaflet is not a supplementary document to be read alongside

professional medical advice but rather the primary, and sometimes sole, authoritative source of information about a medication. In this context, the illocutionary force of imperative constructions in PLs is considerably amplified: directives that in a European context might function as reminders or reinforcements of clinically communicated instructions function in the Ghanaian context as unmediated commands issuing from an invisible institutional authority, with no professional interlocutor available to contextualise, qualify, or humanise them. The power asymmetry that Critical Discourse Analysis identifies as structurally inherent in institutional imperative discourse is therefore not merely reproduced but intensified within the Ghanaian healthcare environment.

Furthermore, the question of genre appropriateness deserves critical scrutiny. The adoption by Ghanaian pharmaceutical companies of PL conventions developed within European regulatory frameworks raises the possibility of what might be termed regulatory genre transplantation . This reflects how the uncritical importation of a textual genre whose formal conventions, linguistic register, and communicative presuppositions were calibrated for a radically different socio-epistemic environment. Ernest Chemist Limited and Amposah-Effah Pharmaceutical Limited, as locally constituted pharmaceutical actors, operate within the regulatory jurisdiction of the Food and Drugs Authority (FDA) of Ghana, which has developed its own guidelines for pharmaceutical labelling and patient information. However, the extent to which these national guidelines have been systematically adapted to reflect the specific health literacy profile, linguistic diversity, and healthcare access patterns of the Ghanaian population, rather than simply adapting EMA templates, remains an underexplored question with direct regulatory and public health implications. The present study's corpus thus opens an important comparative axis: to what extent do the PLs of Ghanaian manufacturers reproduce, modify, or depart from the ideological and structural conventions of their European counterparts, and what do those departures or conformities reveal about the negotiation of pharmaceutical authority in a postcolonial regulatory environment?

The postcolonial dimension of this analysis merits explicit theoretical acknowledgement. The dominance of English as the medium of pharmaceutical communication in Ghana, the adoption of European genre conventions by local manufacturers, and the positioning of the patient as a passive recipient of institutionally authoritative directives all bear the imprint of colonial epistemological hierarchies in which Western biomedical knowledge has historically been constructed as universally valid and culturally neutral. Critical Discourse Analysis, as deployed in this study, is therefore not merely a tool for linguistic description but an instrument of postcolonial critique: it renders visible how pharmaceutical discourse, even when produced by local Ghanaian companies, may reproduce and legitimise knowledge structures and power relations whose genealogy is colonial rather than indigenous. This is not to suggest that biomedical pharmaceutical information is inherently ideologically suspect, but rather that the communicative form through which such information is delivered is never ideologically innocent, and that in the Ghanaian context, the stakes of that ideological encoding are particularly high.

The practical implications of these observations for health communication policy in Ghana and, more broadly, across sub-Saharan Africa are considerable. If, as this study demonstrates, imperative constructions in PLs function as instruments of institutional power, epistemic authority, and social control, then the design of PLs for populations characterised by limited health literacy, restricted healthcare access, and linguistic diversity demands not merely cosmetic simplification but a fundamental reconceptualisation of the communicative relationship between pharmaceutical institutions and patients. This reconceptualisation would entail, at minimum, the development of locally contextualised PL guidelines that account for the specific health literacy profile of Ghanaian patients, the exploration of multilingual or vernacular PL formats that extend meaningful pharmaceutical communication beyond the English-literate minority, and the incorporation of community health communication principles that position the patient as an active, empowered participant in pharmaceutical decision-making rather than a passive subject of institutional directives. The ideological analysis of PL discourse is therefore not an abstract academic exercise conducted at a remove from social reality, but a practically urgent intervention in a communicative domain with direct, measurable consequences for public health outcomes in one of West Africa's most dynamic and populous nations.

CONCLUSIONS AND IMPLICATIONS

Theoretically, the analysis confirms that pharmaceutical leaflets function not merely as informational documents but as ideological instruments embedded within the broader apparatus of pharmaceutical institutional power. The study extends the CDA analysis of power and ideology in health communication to the specific domain of pharmaceutical leaflets, a genre that has received relatively limited critical attention from the perspective of ideological discourse analysis. The demonstration that imperative constructions naturalise asymmetrical power relations through the grammatical erasure of institutional agency advances Critical Discourse Analysis as a productive and necessary framework for the study of health communication genres that have hitherto been examined predominantly through descriptive linguistic lenses. Specifically, the findings substantiate Althusser's (1971) claim that ideological power achieves its greatest efficacy at the precise moment of its invisibility: when patients experience institutional compliance as personal rational agency, the interpellative operation of

pharmaceutical discourse has been fully and silently accomplished.

Methodologically, the study demonstrates that the structural analysis of imperative typology, distinguished along the axes of polarity and syntactic complexity, constitutes a viable and replicable analytical instrument for excavating the ideological architecture of institutional texts. The four-fold typology of PCI, PSI, NCI, and NSI provides a transferable classificatory framework applicable to analogous genres of institutional health communication beyond the PL. Thus, the study provides an empirically grounded four-fold typology of imperative structures in PLs that has not previously been articulated in the discourse analysis literature.

Practically, the findings issue a direct challenge to current pharmaceutical communication practices, particularly within the Ghanaian regulatory context. If the ideological power of PL discourse operates most consequentially upon patient populations with the least critical literacy resources to recognise and resist its interpellative force, then the ethical imperative for regulatory reform is unambiguous: PLs must be reconceptualised not as neutral conduits of medical information but as communicative sites requiring deliberate ideological interrogation, structural simplification, and genuine patient empowerment as their organising communicative principles. Hence, the study contributes a contextually grounded analysis of PL discourse in the Ghanaian healthcare environment, a setting that has been underrepresented in existing PL research.

RECOMMENDATIONS

Based on the study's findings, the following recommendations are offered. Regulatory reform, such as the Pharmaceutical regulatory bodies in Ghana and other African jurisdictions, should develop guidelines for PL production that explicitly attend to the ideological dimensions of imperative use, requiring that simple imperatives (PSI, NSI) be accompanied by accessible explanatory context wherever possible, to mitigate the alienating effects of unconditional commands on lay readers. On health communication training, Pharmaceutical companies should invest in training for leaflet writers that incorporates principles of plain language, patient-centred communication, and critical awareness of the power dynamics encoded in directive structures. The conditional framing used in PCI and NCI constructions should be foregrounded as a model of more dialogic, patient-responsive directive communication. Pedagogically, discourse analysis curricula, particularly at the postgraduate level, should incorporate the analysis of pharmaceutical texts as rich, real-world exemplars of ideological discourse. PLs offer students concrete, analytically tractable instances of the intersection between language, power, and institutional authority. Finally, future studies should expand the corpus to include a larger and more diverse sample of PLs from multiple African contexts, enabling cross-contextual comparison of ideological discourse strategies. Additionally, reader response research, examining how lay patients receive and interpret pharmaceutical imperatives, would provide a crucial reception-side complement to the present producer-centred analysis. Future work should also investigate how digital and multilingual PLs manage the ideological demands of directive discourse across different language and literacy contexts.

LIMITATIONS OF THE STUDY

Notwithstanding the analytical contributions documented above, the present study is subject to several limitations that must be acknowledged with candour rather than minimised through methodological justification.

The most significant limitation concerns the size and representativeness of the corpus. The study analyses a corpus of five pharmaceutical leaflets, a sample that, while permitting the kind of sustained, theoretically grounded close reading that qualitative critical discourse analysis demands, is nonetheless insufficient to support claims of generalisability beyond the specific texts examined. A corpus of five PLs cannot reliably establish whether the ideological patterns of imperative use identified herein are characteristic of Ghanaian pharmaceutical discourse as a whole, representative of broader sub-Saharan African PL production practices, or specific to the particular manufacturers, drug categories, and regulatory moments from which the sampled texts were drawn. The findings are therefore more accurately characterised as theoretically generalisable, that is, productive for the elaboration and refinement of critical discourse frameworks, than empirically generalisable to the wider population of Ghanaian or African PLs and other relatable jurisdictions.

This limitation is further compounded by the absence of systematic variation in corpus composition. A more robustly designed corpus would have incorporated PLs stratified across multiple variables, including drug category, manufacturer type distinguishing between local Ghanaian producers and multinational subsidiaries, regulatory period, and target patient demographic, in order to permit comparative analysis of how ideological patterns of imperative use vary across these contextually significant dimensions. The present corpus does not permit such comparative analysis, and findings that might appear structurally consistent across five texts could potentially dissolve or be significantly complicated under the scrutiny of a larger, more deliberately stratified sample.

Future research should therefore prioritise corpus expansion as its most pressing methodological imperative, ideally constructing a dataset of sufficient scale to sustain both the depth of critical discourse analysis and the breadth of comparative institutional analysis, thereby addressing the tension between interpretive richness and

empirical representativeness that the present study, by necessity, leaves partially unresolved.

REFERENCES

Althusser, L. (1971*). Ideology and ideological state apparatuses*. In L. Althusser (Ed.), Lenin and philosophy (pp. 121–173). NLB.

Askehave, I., & Zethsen, K. K. (2010). 'Check it out' – The constructions of patient discourse in pharmaceutical package inserts. *British Medical Journal*, 344.

Austin, J. L. (1962). *How to do things with words*. Oxford University Press.

Brookes, G. (2026). *Critical Discourse Studies and health communication. In* Handbook on Critical Discourse Studies *(pp. 322-333).* Edward Elgar Publishing.

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

Condoravdi, C., & Lauer, S. (2011). *Performative verbs and performative acts*. In I. Reich (Ed.), Proceedings of Sinn und Bedeutung (SuB) 15 (pp. 1–15). Universaar, Saarland University Press.

Council of the European Communities (1992). Council Directive 92/27/EEC of 31 March 1992 on the labelling of medicinal products for human use. *Official Journal of the European Communities.*

Deetz, S. (1992). *Democracy in an age of corporate colonization*. State University of New York Press.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich.

Edu-Buandoh, D. F., & Ahialey, H. O. (2012). Exploring the ideological implications of questions in elicitation in courtroom cross-examination discourse in Ghana*. Language Discourse and Society*, *2*(1), 11-29.

European Parliament (2001). Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use. *Official Journal of the European Communities*, L311, pp.67-128.

Fairclough, N. (1992). *Critical discourse analysis: The critical study of language*. Longman.

Foucault, M. (1982). The subject and power. *Critical Inquiry*, 8(4), 777–795.

Ghana Health Service (2020). *Ghana health sector annual programme of work and budget*. Accra: Ghana Health Service.

Gustafsson, M. (1975). *Binomial expressions in present-day English: A syntactic and semantic study*. Turku: Turun Yliopisto.

Halliday, M. A. K. (1985). *An introduction to functional grammar*. Edward Arnold.

Haynes, R. B., Ackloo, E., Sahota, N., McDonald, H. P., & Yao, X. (2008). *Interventions for enhancing medication adherence.* Cochrane Database of Systematic Reviews.

Jahrir, A. S., Gultom, Y.W., Herman, H., Zabadi, F., Ngongo, M., Mamadiyarov, Z., Fatmawati, E. and Saputra, N. (2025). *Investigating the elements of short commercial mineral water advertisement: A case on discourse analysis*. *Studies in Media and Communication, 13*(4), 94-104.

Komulainen, H., Lunkka, N., Jansson, N., Meriläinen, M., Wiik, H. and Suhonen, M., 2025. Legitimizing strategies in transformative spaces: institutional meaning-making and organizational change in health care. *Journal of Health Organization and Management, 39*(9), 380-397.

Landis, J. R., and Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*(1),159-174.

Ley, P. (1988). *Communicating with patients: Improving communication, satisfaction and compliance*. London: Croom Helm.

Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International, 15*(3), 259-267.

Owusu-Ansah, L. K. (1992). Where True Power Lies: Modality as an Indication of Power in Two Institutionalised Domains of Language Use. *Edinburgh Working Papers in Linguistics*, *3*, 109-115.

Pander Maat, H. and Lentz, L., 2010. Improving the usability of patient information leaflets. *Patient Education and Counseling*, 80(1), 113-119.

Rad, J. and Melendez-Torres, G. J., 2025. Critical discourse analysis of social media advertisements for GLP-1 receptor agonist weight loss drugs: implications for public perceptions and health communication. *BMC Public Health*, *25*(1), p.2996.

Schwager, M. (2006). *Interpreting imperatives* (Doctoral dissertation). Johann Wolfgang Goethe-Universität, Frankfurt am Main.

Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge University Press.

Thompson, J. B. (1984). *Studies in the theory of ideology*. Polity Press.

Thompson, J. B. (1994). *Ideology and modern culture*. Polity Press.

van Dijk, T. A. (2001). Discourse semantics and ideology. *Discourse & Society*, *6*(2), 243–289.

van Dijk, T. A. (2006). Discourse and manipulation. *Discourse & Society*, 17(3), 359–383.

World Health Organization (2022). *Ghana health profile*. Geneva: WHO.

Zethsen, K. K., & Askehave, I. (2010). Medical texts made simple: Dream or reality? *Hermes*, *44,* 13–32.

Citation: Agyarko, M. A., Danquah, M. B., Tabiri, F., Ankomah, C., and Abbey, E. K. M. (2026). The ideological implications of the use of imperatives in pharmaceutical leaflets. *African Educational Research Journal, 14*(2), 453-466.