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A Syntactic Study of Complementation in Selected Medical Leaflets

دراسة نحوية لمفهوم التكملة في نشرات طبية مختارة

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Abstract

This study investigates the role of complementizers in the syntax and semantics of clausal complements, focusing on the syntactic structure determined by the semantic properties of the matrix predicate. Performativity refers to the action performed under a sentence, and knowing a language involves understanding how to construct correct sentences and use them to generate appropriate utterances. Complementation research in syntactic and semantic domains is examined, with objectives to recognize complementation in scientific and passive language and complementary roles in medical leaflets. Qualitative research, using unstructured exploratory procedures, is more challenging to accurately capture phenomena than quantitative techniques. The study focuses on two factors: the complexity of the syntactic structure (clauses, passive, and scientific language) and the understanding of users and readers in the text of MLs.

Data were statistically evaluated using IBM SPSS version 10, with frequencies, percentages, means, and standard deviations expressed as frequencies, percentages, means, and standard deviation. The frequent and improper use of three structures in machine learning texts can increase linguistic complexity and impact user comprehension. This study uses an analytical approach and Functional Grammar (SFG) theory to analyze the linguistic content of 10 medical leaflets. SFG, proposed by Austrian linguist Michael Alexander Kirkwood Halliday, explores the function of language in discourse or literary expressions. The study used 10 extracts from the Ministry of Global Health's official website and utilized purposive and heterogeneous sampling to select data with diverse features.

Quantitative research does not require extensive data analysis, and there is no correlation between data size and research quantity. Medical leaflets used to treat COVID-19 share commonalities and differences in clause, passive, and scientific language complementation. Clauses convey precise information about drugs, while passive voice emphasizes the drug's actions on the object. Scientific language, on the other hand, describes the drug's mechanism of action, indications, and contraindications, using scientific terminologies and jargon to convey accurate and credible information to the medical community.

Keywords: Complementation - Linguistic – Syntax - Medical – Leaflet – Langue – Clause – Passive – Complex – Scientific.

1. INTRODUCTION

It is understood by "complementation" to refer to the process of adding a linguistic element to another element that would otherwise be syntactically and semantically deficient. In contrast to "modification," which denotes the addition of a non-compulsory item to another item, complementation refers to the addition of a non-compulsory item to another thing.

The syntactic structure of complements is governed by the semantic characteristics of the matrix predicate, and this thesis examines the role complementizers play in the syntax and semantics of clausal complements.

Especially in written forms where potential readers are expected to read textual materials, language use among humans has become essential for promoting communication and information sharing by its users. According to Crystal (2008), language is employed every day, usually at its most specific level, to refer to the specific act of speaking or writing in a particular scenario, such as the textual information contained in medicinal items that is coded in a language. As a collection of arbitrary symbols, it has well-defined properties that are used to human communication, whether it be speaking or writing, to convey meanings (Wardhaugh, 1972).

Linguistic analysis makes an effort to examine the natural language that people use to share information, whether it be spoken or written. It focuses on the existence and provision of formal description of language as a tool for human communication; it methodically gives linguists the ability to make inquiries in order to explore its structural use in relation to its historical development and its communicative competence (Finegan, 2012).

1.1. Research Problem

Predicate arguments are known as complements, whereas clausal arguments of predicates are known as complementation. Investigating various clause forms that adhere to particular semantic classes of predicates is a key component of the complementation investigation. Languages differ in their complement forms, which might include bare infinitives, gerunds, and situations in which the complement phrase is introduced by complementizers. Syntactic studies concentrate on the processes by which complement clauses take on their surface forms. Usage-based reports are designed to offer an accurate picture of the prevalence and distribution of these constructs in both spoken and written language.

A research on medical information pamphlets looked at the grammatical constructions used to write the material. To examine interlocking grammatical systems, a descriptive design and Haillday's (2014) models were employed. Due to the misuse of chemical words, the study discovered that sentence building was complicated. Simple sentence construction was advised in order to improve user understanding. The creation of meaningful texts and information retrieval depend on language description. Understanding how to write proper sentences and use acceptable utterances to ensure the right circumstances are present is a requirement for language proficiency.

1.2. Research Objectives

This study focuses on examining the primary areas of study for complementation in the syntactic and semantic fields.

The following is a summary of the goals:

1. Analyzing the complementation in the clause.

2. Recognizing complementation in passive and scientific language.

3. Recognizing the purposes of complementation in medical pamphlets.

1.3. Research Significance

Since it offers a linguistic examination of phenomena that is thought to be relatively new and requires study from several angles, linguists anticipate that this work will be relevant for their field of study. With the use of linguistic theories and a useful analysis of the excerpts, it is anticipated that this study will add to the body of linguistic literature. Different social institutions could benefit from this study. Finding answers to problems with medical leaflet comprehension and aiding in the improvement of complementation knowledge may both benefit from it.

2. PATIENT INFORMATION LEAFLET (PIL)

Patient Information Leaflets (PILs) are little health pamphlets that are inserted within the package of each medicine and provide medical data. They tell patients on the drug being used, including dosage, side effects, and storage information. Most patients expect to learn information that will help them make informed decisions about their health. They must have access to trustworthy information about drugs, particularly those sold without a prescription over-the-counter. According to Dressler and Eckkrammer (2001), PILs are texts that, in addition to fulfilling a social

purpose, also communicate a number of additional functions to aid patients in managing their diseases and engaging in self-care.

PILs are crucial for providing clear and understandable medical information to patients, but concerns remain about their content, language, template, and design. Patients often struggle to comprehend the wording of PILs, which contradicts the objectives of EU Directive 2001/83/EC, which requires PILs to provide clear and understandable medical information. The language used in PILs is often considered formal and difficult due to the extensive use of complex grammatical structures and medical terminology. As a result, patients still find PILs challenging to read and comprehend, with research showing that most PILs are still linguistically hard. PILs are complex due to their language, structure, and writing style.

Studies have concentrated on improving the readability, organization, and arrangement of Patient Information Languages (PILs). However, little is known about how syntactic patterns affect how well people understand texts. Sentences should be written in an active and straightforward manner, according to the EU Commission's "Guideline on Readability," however further study is required to look at how syntactic structures are used and how that affects PIL complexity. Effective information is essential for decision-making in patient-centered care, and pamphlets that are well-designed may make the best use of it. When developing these materials, health practitioners have to consult with experts in information design.

Over ten years ago, studies began to improve their language and content. However, a significant percentage of users struggle to understand them, leading to health issues and even death. Despite efforts by the European Medicines Agency to make PIL templates more accurate, lengthy

sentences and illegible medical jargon still persist. Further research is needed to understand and improve PILs' effectiveness.

3. LEAFLET SYNTAX

Medical terminology is frequently criticized for being hard to read and understand. One of the factors contributing to this difficulty is the complexity of medicine. Numerous intricate medical words are used in the language of medicine, which is a very specialized language. The European Council and the Medicines, Healthcare Products Regulatory Agency both stipulate that PILs must be written in a way that makes it simple for readers to understand the information provided and, as a consequence, helps the patient use medicine correctly and safely. But there are still problems with readability and linguistic complexity in these PILs. According to I. Gal and A. Prigat (2005), one of these difficulties is related to the structure of PILs, which makes use of several complex grammatical structures and lengthy, challenging words.

The overall consistency and clarity of the sentence structure must be carefully considered by users and readers as a result, who are compelled to take their time to do so. The usage of the grammatical structures (command, passive, and negative) had an effect on the reader's FEthere was a paucity of study on the topic (C. Burgers et al., 2015). As a result, this study begins by explaining these grammatical structures before utilising descriptive statistical analysis to examine their usage and frequency of occurrence. In order to determine their impact on readers' and users' comprehension, 210 people participated in a comprehension questionnaire.

4. DEFINITION OF COMPLEMENTATION

The term "complement" is derived from the Latin words "com-" for "intense" and "plere" for "full." Complere means "to fill up or satisfy," while "ment" refers to the product or tool of the verb. The term "the full building" refers to the component that gives the overall thing its meaning or excellence (Harley, 2003: 189). In reality, because they use various approaches, linguists have diverse definitions of the word sentential complementation (or complement phrase, as many grammarians like to call it).

Complement clauses are those that "serve as an argument of the primary predicate," according to Cristofara (2003:95). Arguments are required for defining predicates, he continues.

A complement clause is described by McCaway (1988, quoted in Scheibman, 2002:32) as "a predicate that serves a key syntactic purpose in the sentence" (subject, object, etc.). Because they can appear in the spaces left by regular noun phrases, complement clauses are often known as "noun clauses" or "nominal clauses." The modern term "complement clause" is used to describe the link between the complementing clauses and the main sentence's verb (Miller, 2002: 63).

The complement clauses are expressed by phrase structure rules in transformational generative grammar as having the same distributional patterns as noun phrases. As a result, complement clauses are driven by transformationalists to generate noun phrases (NP S) (Bussman, 1996: S.V).

Although complement is a term used by different approaches, the basic idea of complement is that it is a construction selected by the head

and can be said to complete the meaning of the structure (see Quirk et al., 1985:65 , Leech 2006:22 , Borjars and Burridge, 2010: 71). For example:

I know [that he will do it].

I want [to go with you].

I don't know *where he lives.

The phrases "I know," "I wish," and "I don't know" are syntactically and semantically incomplete in the cases above. The meaning of the entire phrase must be completed by another construction because the heads are transitive verbs. The sentences that follow these heads are therefore necessary constructs that serve as sentential complementation.

5. Syntactic Functions

In general, language is concerned with offering and requesting items or actions, as well as with giving and requiring knowledge. Sentences with different structures frequently serve different communicative purposes. For example, if a speaker wants to assert or state that something is true, they will typically use a declarative sentence, like "Snow is white," whereas an imperative sentence, like "Leave the room!" is appropriate.

Finally, an interrogative statement, like What time is it?, is the obvious choice if a speaker wishes to pose a question. According to Akmajian et al. (1994:229), interrogative sentences are employed literally to ask questions and have other highly significant semantic facts. For further information, see Yule (1996:54-55) and Taiwo (2005:118), see Table (1).

Table (1): Syntactic Functions

Form	Function	Example
Statements	Interrogative	You don't like it?
	Imperative	you will do as you are told
	Exclamatory	she is a lovely girl!
Questions	Declarative	what's the point! ? (= there is no point)
	Imperative	will you be quite!
	Exclamatory	isn't it a marvelous day !
Commands	Interrogative	everybody look? (= do you mean that)

6. METHODOLOGY

6.1. Design and Method

Qualitative research involves the use of unstructured exploratory techniques such as group discussions and documentation. In contrast to quantitative method, it is more difficult to precisely capture phenomena with qualitative research. As a result, Qualitative methodology is interpretive and heterogeneous in that it employs a variety of data analysis methods to evaluate and extend an existing theory (Vasitachis, 2009).

However, if we want to have a comprehensive perspective and want to obtain in-depth-knowledge about certain objects, we use the quantitative approach to conduct a statistical analysis of the text of the chosen leaflets. The frequencies and percentages of these three syntactic patterns in the chosen leaflets are displayed using statistical descriptive analysis.

The two factors that had the biggest bearing on the study were. First, the third syntactic structure's complexity, which is an independent variable

(Command, passive, negation). The second dependent variable in this study is how well users\ readers understand the text of the MLs. By administering a questionnaire to gauge reading comprehension, users' and readers' understanding is evaluated.

Using IBM SPSS statistics version 22 the data were statistically evaluated. The data were expressed as frequencies, percentages, means, and standard deviation by descriptive statistical analysis. As reported in the research Burgers et al. , (2015), the frequent and improper usage of these three structures in machine learning texts may lead to an increase in the text's linguistic complexity and have an impact on user's comprehension. The study relies on the analytical approach and based on the theory (Halliday, 2014) to analyze the linguistic content of 10 medical leaflets.

6.2. Model and Analysis

Austrian linguist Michael Alexander Kirkwood Halliday is the creator of the Systemic Functional Grammar (SFG) grammatical theory. The emphasis is on how language functions in dialogue and literary forms. Functional Grammar and Systemic Grammar are the two parts of SFG. Language is described by systemic grammar as a system network with possibilities and subsystems that language users may select from. According to functional grammar, language is a tool for social interaction that is based on its purposes and uses. Halliday recommends doing style analysis utilising the three logical steps of Analysis, Interpretation, and Evaluation, as well as more abstract and well-coded linguistic and grammatical analysis that focuses on the functions-meta-functions that

are inherent to all languages. Those intrinsic functions of language are called as ideational function, the interpersonal function and the textual function (Halliday ,2014), see Figure (1).

6.3. Sampling

The Ministry of Global Health's official website was used to download more than 5 medical publications, and the terms "COVID-19" and "medical leaflets" were relied upon in the initial search process. 2 out of the 5 medical publications were extracted to represent the study sample and were subjected to syntactic, semantic, and pragmatic analysis. With a purposeful sample, the researcher must use discretion to select examples that will contribute to the resolution of the research problems and the accomplishment of the study objectives. The researcher must take into account the impact of his or her decision to include or exclude instances on the research while choosing a sample in this way, which is why it is frequently referred to as judgements sampling (Saunders, Lewis, & Thornhill, 2009).

The statements that follow are taken as examples from leaflets accompanying non-prescription medicines:

Meronem IV is presented as a sterile white powder containing meropenem; 500 mg or 1g as the trihydrate blended with anhydrous sodium carbonate for constitution. Meronem IV injection contains 208 mg sodium carbonate for each gram of meropenem (anhydrous potency).

Meronem IV is indicated for treatment of the following infections in adults and children aged 3 months and older (see sections 4.4 and 5.1):

Severe pneumonia, including hospital and ventilator-associated pneumonia.

Broncho-pulmonary infections in cystic fibrosis

Complicated urinary tract infections

Complicated intra-abdominal infections

Intra- and post-partum infections

Complicated skin and soft tissue infections

Acute bacterial meningitis

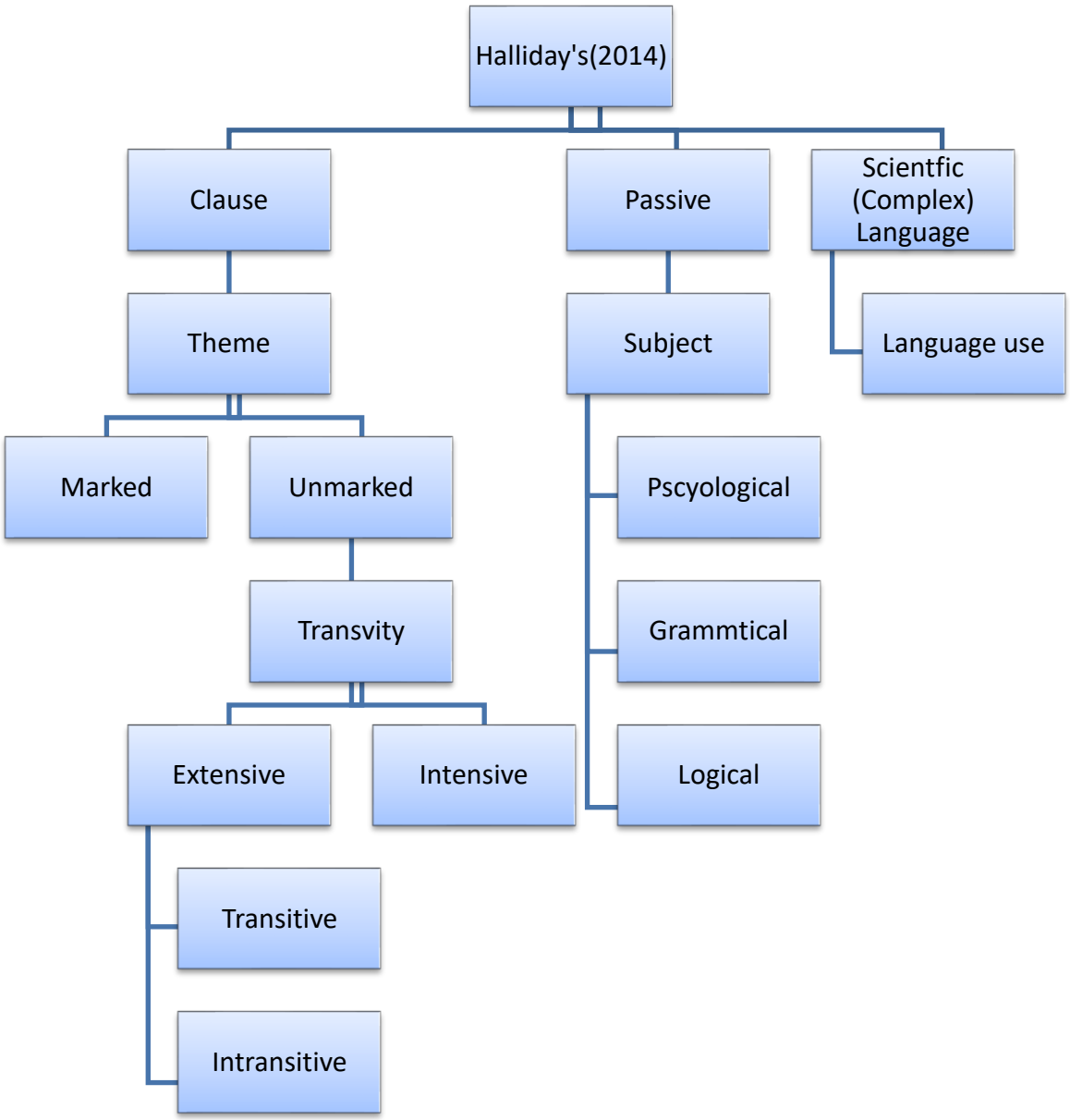

Figure (1): Study Model, Based on (Halliday, 2014).

7. ANALYSIS , FINDINGS AND DISCUSSION

7.1. Analysis and Findings of First Medical Leaflet

The first Medical Leaflet is about Meronem IV, it contains (5000) words make (350) considered phrases, (250) phrases of them only are taken in consider as follow:

For Clause: (200) phrases are considered in analyzing: (160) phrases for marked theme and (40) phrases for non-marked one, the marked theme contain (140) phrases could be split into (20) Transitive and (120) phrases for intransive.

For Passive: (35) phrases are considered: (20) phrases for logical subject, (10) phrases for grammatical subject and (5) phrases for psychological.

For Scientific Language: (15) phrases are considered.

Table (2) gives some examples for each component while table (3) gives the percentage of each component in the analyzed medical leaflet.

Table (2): Some examples Meronem IV medical leaflet

Clause		**Passive**		**Scientific (Complex) Language**	
Theme		Subject			Language use
Marked	Unmarked	Psychological	Grammatical	Logical	POSOLOGY
NAME OF THE MEDICINAL PRODUCT QUALITATIVE AND QUANTITATIVE COMPOSITION PHARMACEUTICAL FORM POSOLOGY AND METHOD OF ADMINISTRATION CONTRAINDICATIONS	Transvity	. Meronem IV is presented as a sterile white powder containing meropenem; 500 mg or 1g as the trihydrate blended with anhydrous sodium	Additional considerations for dosing are needed when treating patients with renal insufficiency (see further below	Meronem IV is presented as a sterile white powder containing meropenem; 500 mg or 1g as the trihydrate blended with anhydrous	Meropenem is usually given by intravenous infusion over approximately 15 to 30 minutes Meronem IV is presented as a sterile white powder containing meropenem; 500

SPECIAL WARNINGS AND PRECAUTIONS FOR USE		carbonate for constitution. Meronem IV injection contains 208 mg sodium carbonate for each gram of meropenem (anhydrous potency).		sodium carbonate for constitution. Meronem IV injection contains 208 mg sodium carbonate for each gram of meropenem (anhydrous potency).	mg or 1g as the trihydrate blended with anhydrous sodium carbonate for constitution. Meronem IV injection contains 208 mg sodium carbonate for each gram of meropenem (anhydrous potency).
Extensive	Intensive				
• **Severe pneumonia, including hospital and ventilator-associated pneumonia.** • **Broncho-pulmonary infections in cystic fibrosis** • **Complicated urinary tract infections** • **Complicated intra-abdominal infections** • **Intra- and post-partum infections** • **Complicated skin and soft tissue infections** • **Acute bacterial meningitis**	The selection of meropenem to treat an individual patient should take into account the appropriateness of using a carbapenem antibacterial agent based on factors such as severity of the infection, the prevalence of resistance to other suitable antibacterial agents and the risk of selecting for carbapenemresistant bacteria.				

Clause is used in this medical leaflet to describe the purpose of the medication and its effectiveness in treating bacterial infections. The clause "Meronem IV is indicated for the treatment of serious bacterial infections" is used to describe the medication's function. The use of marked and non-marked themes is used to highlight the importance of certain information. For example, the marked theme "serious bacterial infections" is used to emphasize the purpose of the medication.

The passive voice is used in this medical leaflet to describe the action of the medication. For example, "Meronem IV works by inhibiting bacterial cell wall synthesis, leading to bacterial death" is written in the passive voice to emphasize the medication's function rather than the action taken by the patient.

Scientific language is used in this medical leaflet to describe the medication's mechanism of action and its effectiveness. For example,

"Meronem IV contains the active ingredient meropenem, which is a carbapenem antibiotic that inhibits bacterial cell wall synthesis by binding to penicillin-binding proteins" is written in scientific language to describe how the medication works to treat bacterial infections.

Table (3): Meronem IVmedical leaflet analysis

<table>
<tr><td colspan="3">Clause
80 % of total</td><td colspan="2">Passive
18 % of total</td><td>Scientfic (Complex) Language</td></tr>
<tr><td rowspan="2">Theme</td><td>Marked</td><td>Unmarked</td><td colspan="2">Subject</td><td>2 %</td></tr>
<tr><td>75 % of Clause</td><td>25 % of Clause</td><td>Psychological</td><td>Grammatical</td><td>Logical</td></tr>
<tr><td colspan="3">Transvity</td><td>12%</td><td>28%</td><td>60%</td></tr>
<tr><td colspan="2">Extensive
85% of Marked theme</td><td colspan="4">Intensive
15% of marked theme</td></tr>
<tr><td colspan="2">Extensive</td><td colspan="4" rowspan="3"></td></tr>
<tr><td>Transitive</td><td>Intransitive</td></tr>
<tr><td>85% of Extensive</td><td>15% of Extensive</td></tr>
</table>

In conclusion, the use of complementation in the Meronem IV medical leaflet is essential in providing comprehensive information about the medication and its usage. The use of clause, passive voice, and scientific language helps to convey the information effectively to the reader.

7.2. Analysis and Findings of Second Medical Leaflet

The Second Medical Leaflet is about Zinc Gluconate , it contains (1300) words make (100) considered phrases, (90) phrases of them only are taken in consider as follow:

For Clause: (60) phrases are considered in analyzing: (45) phrases for marked theme and (15) phrases for non-marked one, the marked theme contain (45) phrases could be split into (10) Transitive and (35) phrases for intransive.

For Passive: (25) phrases are considered: (15) phrases for logical subject, (2) phrases for grammatical subject and (8) phrases for psychological.

For Scientific Language: (5) phrases are considered.

Table (4) gives some examples for each component while table (5) gives the percentage of each component in the analyzed medical leaflet.

Table (4): Some examples from Zinc Gluconate medical leaflet

Clause		**Passive**		**Scientific (Complex) Language**	
Theme		Subject			Language use
Marked	Unmarked	Psychological	Grammatical	Logical	Cold-Eeze Sugar Free [OTC]; Cold-Eeze [OTC]; Zn-50 [OTC]
Zinc Gluconate **Brand Names: US** **What is this drug used for?** **What do I need to tell my doctor BEFORE I take this drug?** **What are some things I need to know or do while I take this drug? All products:**	Transvity	: Even though it may be rare, some people may have very bad and sometimes deadly side effects when taking a drug. Tell your doctor or get medical help right away if you have any of the following signs or symptoms that **may be related** to a very bad side effect:	What is this drug used for? It is used to help the immune system. It is used to ease cold and flu signs. It is used to help growth and good health	How is this drug best taken? It is best if this drug is taken with a meal. It is not meant to be comprehensive and should be used as a tool to help the user understand and/or assess potential diagnostic and treatment options.	
Extensive	Intensive				
Extended-release tablets: Swallow whole. Do not chew, break, or crush. Lozenge: Suck oral lozenge. Do not chew, break, or crush it. Do not swallow it whole. Do not take on an empty stomach. Do not eat or drink for at least 15 minutes after using this drug.	What are some other side effects of this drug? All drugs may cause side effects. However, many people have no side effects or only have minor side effects. Call your doctor or get medical help if you have any side effects that bother you or do not go away. These are not all of the side effects that may occur. If you have questions about side effects, call your doctor. Call your doctor for medical advice about side effects. You may report side effects to your national health				

	agency. You may report side effects to the FDA at 1-800-332-1088. You may also report side effects at https://www.fda.gov/medwatch.				

Clause is used in this medical leaflet to describe the purpose of the medication and its effectiveness in providing zinc supplementation. The clause "Zinc Gluconate is indicated for the prevention and treatment of zinc deficiency" is used to describe the medication's function. The use of marked and non-marked themes is used to highlight the importance of certain information. For example, the marked theme "zinc deficiency" is used to emphasize the purpose of the medication.

The passive voice is used in this medical leaflet to describe the action of the medication. For example, "Zinc Gluconate is rapidly absorbed and provides a quick source of zinc" is written in the passive voice to emphasize the medication's function rather than the action taken by the patient.

Scientific language is used in this medical leaflet to describe the medication's mechanism of action and its effectiveness. For example, "Zinc is an essential mineral that is involved in numerous physiological processes, including immune function, wound healing, and DNA synthesis" is written in scientific language to describe how the medication works to prevent and treat zinc deficiency.

Table (5): Zinc Gluconate medical leaflet analysis

<table>
<tr><td colspan="3">Clause
67 % of total</td><td colspan="2">Passive
30 % of total</td><td>Scientfic (Complex)
Language</td></tr>
<tr><td rowspan="2">Theme</td><td>Marked</td><td>Unmarked</td><td colspan="2">Subject</td><td>5 %</td></tr>
<tr><td>75 % of Clause</td><td>25 % of Clause</td><td>Psychological</td><td>Grammatical</td><td>Logical</td></tr>
<tr><td colspan="3">Transvity</td><td>32%</td><td>8%</td><td>60%</td></tr>
<tr><td colspan="2">Extensive
70% of Marked theme</td><td colspan="4">Intensive
30 % of marked theme</td></tr>
<tr><td colspan="3">Extensive</td><td colspan="3" rowspan="3"></td></tr>
<tr><td>Transitive</td><td colspan="2">Intransitive</td></tr>
<tr><td>80% of Extensive</td><td colspan="2">20% of Extensive</td></tr>
</table>

In conclusion, the use of complementation in the Zinc Gluconate medical leaflet is essential in providing comprehensive information about the medication and its usage. The use of clause, passive voice, and scientific language helps to convey the information effectively to the reader.

CONCLUSION

Based on the linguistic study of complementation in selected medical leaflets, specifically those used to treat COVID-19, the research found a significant use of complementation in different forms including clauses, passives and scientific language. Overall, the function of complementation was to provide clear and concise information to patients and healthcare providers alike.

The use of clauses in these medical leaflets was particularly noteworthy as they allowed for a more detailed explanation of medical procedures and treatments. Passive language was also used to place emphasis on the object of the sentence and to create a more formal tone. Scientific language was used to provide accurate and precise information to healthcare providers.

Based on analysis of Meronem IV, the linguistic complementation in this medical leaflet seems to be focused on the use of technical medical terminology to describe the drug and its effects on the body. The language

used in the leaflet is precise and concise, with a strong emphasis on providing clear instructions and warnings for the safe and effective use of the drug. Overall, the language used in this leaflet seems to be geared towards healthcare professionals rather than the general public.

Regarding the clause complementation identified in Zinc Gluconate medical leaflet uses various types of clauses including finite and non-finite clauses. The finite clauses are used to express complete actions, while non-finite clauses are used to express partial actions. These clauses serve as complements to verbs, adjectives, or adverbs. Regarding the passive complementation, it is observed that the passive voice is used in the Zinc Gluconate medical leaflet to describe the actions performed by the drug. For example, "Zinc Gluconate is administered orally" is a passive sentence, which emphasizes the action on the object rather than the doer. Regarding the scientific language complementation, it is noticed that the Zinc Gluconate medical leaflet uses scientific language to describe the drug and its effects. The scientific terminologies and jargon are used to convey precise and accurate information to the target audience, which in this case is the medical community. The use of scientific language also adds credibility and authority to the information presented in the medical leaflet.

Medical leaflets used to treat COVID-19 share some commonalities and differences in their complementation of clause, passive and scientific language, in general.

Firstly, in terms of clause complementation, medical leaflets used to treat COVID-19 generally use various types of clauses to convey information about the drugs. The use of clauses in medical leaflets serves as complements to verbs, adjectives, or adverbs, to convey precise

information about the drug's indications, contraindications, and mechanism of action.

Secondly, in terms of passive complementation, the medical leaflets used to treat COVID-19 generally use the passive voice to describe the actions performed by the drugs. The passive voice is used to put emphasis on the action on the object rather than the doer. This highlights the importance of the drug's actions and effects on the patient.

Lastly, in terms of scientific language complementation, medical leaflets used to treat COVID-19 generally use scientific language to describe the drugs' mechanism of action, indications, and contraindications. The use of scientific terminologies and jargon is used to convey precise and accurate information to the medical community, which is the intended target audience, in a credible and authoritative manner.

In conclusion, the linguistic study of complementation in selected medical leaflets showed that the use of complementation in clause, passive, and scientific language was crucial to effectively communicate medical information to the target audience. It is recommended that medical leaflets continue to utilize these forms of complementation to ensure that patients and healthcare providers understand the information provided, especially in the context of COVID-19.

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