



STRUCTURAL FEATURES OF PHARMACEUTICAL TERMS IN ENGLISH

Xilola Sotvaldiyeva

Farg‘ona davlat universiteti,

Ingliz tili amaliy kursi kafedrası dotsenti

Erkinova Oynura Qudratillo qizi

Farg‘ona davlat universiteti, magistranti

Annotation The field of pharmacy, characterized by its unique terminology, serves as a bridge between medicine and the precise language of chemistry, biology, and pharmacology. This article aims to explore the structural features of pharmaceutical terms in English, highlighting their morphological, syntactic, and semantic characteristics. By analyzing a range of examples, this paper seeks to elucidate the conventions that govern the formation, meaning, and interrelation of these terms to enhance understanding among professionals and learners in the pharmaceutical sciences.

Key words: structural feature, morphological and semantic elements, affixal negation, root, prefix, suffix, abbreviation, nomenclature

Annotatsiya Farmatsevtika sohasi o'ziga xos terminologiyasi bilan tibbiyot va kimyo, biologiya va farmakologiyaning aniq tili o'rtasida ko'prik vazifasini bajaradi. Ushbu maqola ingliz tilidagi farmatsevtik atamalarining strukturaviy xususiyatlarini o'rganishga qaratilgan bo'lib, ularning morfologik, sintaktik va semantik xususiyatlarini ajratib ko'rsatadi. Turli misollarni tahlil qilish orqali ushbu maqola ushbu atamalarni shakllantirish, ma'nosi va o'zaro aloqalarini boshqaruvchi konventsionalarni tushuntirishni maqsad qilmoqda, bu esa farmatsevtika fanlaridagi mutaxassislar va talabalarning tushunishini oshirishga yordam beradi.

Kalit so'zlar: strukturaviy xususiyat, morfologik va semantik elementlar, affiksalar inkor, ildiz, prefiks, suffiks, qisqartma, nomenklatura

Аннотация Область фармацевтики, характеризующаяся своей уникальной терминологией, служит мостом между медициной и точным языком химии, биологии и фармакологии. Цель этой статьи - исследовать структурные особенности фармацевтических терминов на английском языке, подчеркивая их морфологические, синтаксические и семантические характеристики. Анализируя ряд примеров, данная работа стремится прояснить конвенции, которые регулируют формирование, значение и взаимосвязь этих терминов для повышения понимания среди профессионалов и учащихся в области фармацевтических наук.

Ключевые слова: структурная особенность, морфологические и семантические элементы, аффиксальное отрицание, корень, префикс, суффикс, аббревиатура, номенклатура

INTRODUCTION

The pharmaceutical lexicon is replete with specialized terms that convey essential information regarding drugs, their effects, mechanisms, and classifications. Understanding the structural features of these terms is vital for effective communication in the pharmaceutical industry and academia. This paper examines the morphological, syntactic, and semantic elements that characterize pharmaceutical terminology in English, providing insights into how these structures aid in communication and comprehension.

The task of modern terminology is to study the linguistic characteristics of terms. Therefore, the development of terminology in every field and in every language is related to the further improvement and modernization of that field. The terminology of each language is considered a part of the national language system.

LITERATURE REVIEW AND METHODOLOGY

Modern terminological works note various properties of the term, and linguists agree that the term is related to a scientific concept. On other features of the term, scientists' opinions differ each other. Every language has their unique terms and linguists try to find out each single word because of globalization that may result in the need of new terms and they can analyze them according to branches of linguistics.

The scientific work of B. Dzuganova is of significant importance among the studies conducted on the morphological analysis of medical terms. The researcher has analyzed the affixation aspect of terms in the field of medicine, particularly focusing on negative-affecting affixes. It is known that through such affixes, many terms expressing medical signs, diseases, and defects are given negative connotations. B. Dzuganova referred to these types of affixes as "affixal negation." She noted that there are five prefixes (a-, dis-, in-, non-, un-) and one suffix (-less) that convey negative meanings. Additionally, it has been established that prefixes such as anti-, contra-, counter-, de-, dys-, ex-, extra-, mal- can partially impart a negative connotation to the words they attach to (for example, antibody - which expresses a positive meaning: a substance in the human body that fights against disease). The results of this scholar's analysis contribute to a better understanding of medical vocabulary.

Among the dissertation works that study English medical terminology as a specific research object, linguist E.I. Chupilina's scientific work titled "Structural-Semantic Features of Common Words in Modern English Medical Terminology" stands out. The research is particularly noteworthy. It presents the terminological and non-terminological meanings of 100 terms, including medical terms such as approach, delivery, discharge, heart, etc., using a contextual method. Additionally, their structural-semantic aspects have been studied. In I.V. Motchenko's research titled "Main Trends in the Formation of English Medical Terminology,"

medical terms are analyzed from lexical-semantic, morphological, syntactic, and etymological perspectives. The study covers the linguistic landscape of English medical terminology from the second half of the 20th century in both diachronic and synchronic contexts. The scholar has identified that new term-words and term-phrases in modern English medical terminology are created through methods such as abbreviation, affixation, conversion, metaphorization, metonymization, synonymy, and term formation. These methods have contributed to the development of the medical terminology system over the years. According to the linguist's research, the main factors influencing the formation of the English medical terminological system include:

- New achievements in science and technology (e.g., detector);
- New advancements in medicine and emerging new fields in healthcare (e.g., orthokeratology);
- New social phenomena (e.g., drug addict; AIDS).

As can be seen, this scholarly work stands out for being one of the first analyses of neologisms within English medical terminology.

RESULT AND DISCUSSION

"The terminological accumulation consists of several components that can interchange with synonyms"¹⁶⁶. Beyond that there are different ways of making pharmaceutical terms: 1) morphological 2) semantic 3) abbreviation and the most effective one is morphological. It consists of suffix and prefix

Morphological Structure of Pharmaceutical Terms

Pharmaceutical terms often exhibit complex morphological structures, featuring prefixes, roots, and suffixes that contribute to their meanings. For example, the term "antihypertensive" can be broken down into three parts: "anti-" (against), "hyper-" (excessive), and "-tensive" (tension). Such morphological analysis aids in understanding the function and categorization of drugs. Many pharmaceutical terms are derived from Greek or Latin, reflecting their historical origins and allowing for a degree of universal understanding across different languages.

The morphological structure of pharmaceutical terms can be analyzed by breaking them down into their component parts, including prefixes, roots, and suffixes. These followings can be example

1. Roots

Pharmaco refers to drugs or medicine (e.g., pharmacology), therap relates to treatment (e.g., therapy, therapeutic), tox pertains to poison or toxicity (e.g., toxicology), bio indicates life or living organisms (e.g., bioavailability), chem refers to chemicals or chemistry (e.g., chemotherapeutic).

2. Prefixes

¹⁶⁶ Трифонова Е.Н. Структурные особенности полисемантических банковских терминов в английском языке // Филология и литературоведение. – С. 201

- a) Anti-: Against or opposing (e.g., antibiotic, antiseptic)
- b) Intra-: Within (e.g., intravenous)
- c) Sub-: Under or below (e.g., subcutaneous)
- d) Pre-: Before (e.g., preclinical)
- e) Post-: After (e.g., postoperative)

3. Suffixes: -cide - to kill (e.g., bactericide), -therapy - treatment (e.g. chemotherapy), -itis inflammation (e.g arthritis), -mimetic - Mimicking or simulating (e.g sympathomimetic).

Understanding the morphological structure of pharmaceutical terms can help professionals in the field deduce meanings and communicate effectively. By breaking down terms into their components, one can gain insights into the functions and classifications of various drugs and treatments and there are some analysis of pharmaceutical terms in terms of morphology.

1. Pharmacology Pharmaco- (root) + -logy (suffix meaning "study of") and meaning: The study of drugs and their effects.

2. Antibiotic Anti- (prefix meaning "against") + bio- (root meaning "life") + -tic (suffix relating to) and meaning: A substance that works against life forms, specifically bacteria.

3. Intravenous Intra- (prefix meaning "within") + ven- (root meaning "vein") + -ous (suffix indicating "related to" Administered within a vein.

4. Chemotherapy Chem- (root meaning "chemical") + -therapy (suffix meaning "treatment") and meaning: Treatment using chemical substances, often for cancer.

5. Bactericide Bacteri- (root referring to bacteria) + -cide (suffix meaning "to kill") and meaning: A substance that kills bacteria.

Pharmaceutical terms frequently utilize compounding, a linguistic process wherein two or more words are combined to form a new term. For example, the term "antibacterial" is a compound of "anti-" (against) and "bacterial" (pertaining to bacteria). This structure allows for the concise expression of complex concepts, which is paramount in a field where specificity is crucial.

Affixes play a critical role in expanding the pharmaceutical vocabulary. Prefixes and suffixes modify root words to convey different meanings or associations. For instance, the prefix "bio-" denotes life (e.g., "biopharmaceutical"), while the suffix "-static" indicates the inhibiting effect (e.g., "bacteriostatic"). This morphological flexibility enables the creation of a vast array of terms that can describe various aspects of pharmaceuticals.

1. Abbreviation. In contexts where brevity is essential, truncation and abbreviation are common. Terms such as "NSAIDs" (Non-Steroidal Anti-Inflammatory Drugs) exemplify this feature. Such practices facilitate quick communication among professionals, particularly in clinical settings or research environments. Also In pharmaceutical terminology abbreviations (e.g., FDA for Food and Drug Administration) and acronyms simplify complex terms or phrases.

2. Nomenclature: International Nonproprietary Names (INN): These are standardized names for active pharmaceutical ingredients. For example, "ibuprofen" is the INN for a common

pain reliever. In addition, A nomenclature, which translates to "a list of names," is a system of naming for a particular domain created. Medical terminology is subject to stringent linguistic regulations. Domain experts compile and construct the terms, and scientific authorities approve them. Standardizing the domain language's usage is intended to promote monosemy and prevent ambiguity. Anatomical nomenclature, which designates bones, organs, and cells, and nosological nomenclature, which designates diseases and symptoms, are the two basic categories of nomenclature used in the medical field. The following one can be example for nomenclature

Brand Names vs. Generic Names: Pharmaceutical products often have both a brand name (e.g., Advil) and a generic name (e.g., ibuprofen), which can affect their structural representation.

3. Classification:

- Therapeutic Categories: Terms can be structured based on the therapeutic area they address, such as "antidepressants," "antihypertensives," or "analgesics."
- Chemical Structure: Some terms reflect the chemical structure of the compounds, such as "benzodiazepine," which indicates a specific chemical framework.
- Pharmaceutical terminology often includes abbreviations (e.g., FDA for Food and Drug Administration) and acronyms that simplify complex terms or phrases.

5. Synonyms and Variants:

- Many pharmaceutical terms have synonyms or variants that may differ based on regional usage or specific contexts within the field, such as "pain reliever" and "analgesic."

CONCLUSION

Today, the practical and theoretical issues of terminology have become a problem of state significance, necessitating a deeper study of terminology, the creation of terms, and their regulation based on the laws of language. Therefore, it is one of the pressing issues of our time to conduct more in-depth research into various terminological systems of language and to thoroughly investigate them in relation to the diverse issues of terminology. In English language when we analyze pharmaceutical terms in a structural way, we can comprehend how to appear words and know the derivation of terms. Every element can cause to create medical terms and it can be linked to real life and New terms can be in need of contemporary requirements in any society.

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