

## Researches on Medical Terminology in Uzbek Linguistics: Qualitative and Quantitative Analysis

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### Abstract

*The article examines dissertations devoted to the study of medical terminology in Uzbek linguistics. Fourteen monographic studies collected to date were identified and made qualitative and quantitative research. Furthermore, their chronological order is shown with the help of a diagram. It was found that medical terms are studied in ten areas of linguistics in these scientific works, and determining the semantic characteristics of the field units is considered the most priority. It follows that the meaning and content of medical terms are considered as one of the issues of particular interest to researchers. This scientific research showed that the study of medical terminology in Uzbek linguistics began since 1967 on a monographic scale and proved that the field of study of medical terminology in Uzbek linguistics was gradually formed, covering various areas of linguistics, such as linguoculturology, linguopragmatics, linguopoetics. It also served to highlight the achievements and shortcomings of the field.*

**Keywords:** Medical terminology, term, studies, dissertations, internationalization, terminological system, chronology, gradual development.

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### Introduction

Today, Uzbek medical terminology is developing fast. Admittedly, the role of many scientists is great in progressing in this field. Various aspects of medical terms have been studied and analyzed in their scientific works. Dissertations of the researchers such as D.Bozorova, A.Khusanov, A.Kasimov, Z.Mirakhmedova, N.Gaybullaeva, F.Abdulkhairova, F.Akbarkhodjayeva, A.Saidnomanov, N.Rasulova, D.Khudoykulova, B.Suyunov, M.Navruzova, B.Gafurov are noteworthy. Below, these scientific researches are thoroughly studied and the theoretical landscape of this field is clearly shown.

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## Literature Analysis and Methodology

It is known that the study of medical terms was carried out by several scientists. They described the research conducted to date, i.e. analyzed it qualitatively. They were able to justify the importance of each work for linguistics by it. But the quantity of them and general analysis of the linguistic fields covered have not been investigated yet. Taking this into account, it is considered appropriate to study the monographic works qualitatively and quantitatively in the article.

## Result and Discussion

The first research carried out in Uzbek linguistics on medical terminology is D.Bozorova's dissertation entitled "Semantics of names of human body parts and words in Turkic languages based on them" [1]. This work focuses on the specific lexical-semantic aspects of the names of human body parts, that is, somatisms, recorded in the literature of ancient Turkic languages. Another research scientist, A.Khusanov, in his dissertation on the topic "Names of diseases and symptoms in Uzbek" [2], took the terms representing diseases and their symptoms, which occupy a large volume in medical terminology, as objects, and achieved the following results:

- 14 different clinical terms were identified;
- Most lexemes referring to diseases and their symptoms are *-ma, -cha, -sh, -ish, -la, -lash, -lik, -simon* It is proven that it is formed from additions such as;
- it is recognized that the main external sources of the terms of this field are Arabic, Persian, Tajik and Russian languages.

In addition, in this work, a special emphasis is placed on the issue of existing problems among the terms within the subject, which mainly expresses the researcher's scientific hypotheses and observations regarding synonymy, confusion in the spelling of terms. In particular, as alternatives to the Latin term "aliniomentalis" in the Uzbek language it is emphasized that lexical units such as *madness, insanity, insanity, trade, jinnisang, illik, esvoslik* are used; It is noted that terms such as *blue cough, blue spot, blue water, black scab, and white feed* are sometimes added and sometimes written separately. The researcher made his suggestions for their regulation.

Medical terminology is a multifaceted field. For this reason, various literature and scientific works can be found in it. In particular, the field of pharmaceuticals also occupies a certain part of medicine. The terms of this field are deeply analyzed in A. Kasimov's dissertation "Pharmaceutical Terminology in Modern Uzbek" [3]. The researcher studied the morphological aspect of field terms and found in their internal structure *-ma, -lik, -(u)v+chi, -(i)sh, -ki* (its forms: *-gi, -g'i, -qi*) - *gich* (its forms : based the active use of morphemes such as

-kich, -kich, -gich) . Also, A. Kasimov studied the units of this field, Persian-Tajik (*sesame, vinegar, vinegar*), Arabic (*cinnamon, olive, juice*) and Russian (*novocaine, starch, acid*) languages are their sources of external enrichment. The issue of some problems in the terminology of the field was not ignored in the work. In particular, the scientist gave an opinion such as: " Synonymy decorates artistic, journalistic, and lively conversational speech, but it has no place in the scientific method" [3, 127], and cited several terms as examples . In addition, the analysis of the shortness of some terms ( *substances used to reduce muscle tone* ) and spelling errors ( *kuracha* ) was also included in the work.

The study of the linguist Z. Mirahmedova called "Anatomical terminology of the Uzbek language" [4] focused on the field of anatomy, which shows another "edge" of medicine. The semantics, morphology, devoted to the study of its etymology and problems . The researcher says : " Anatomical terms that make up a single terminological system, in turn, are divided into several subject groups. Studying terms divided into thematic groups helps to determine the entire vocabulary of a certain terminological system, in this case Uzbek anatomical terminology, its formation and development possibilities" [4, 68]. In the study, more than ten thousand anatomical terms were divided into thematic groups and their semantic analysis was carried out. Also, it is recognized that, in addition to the linguistic means of the Uzbek language, the Arabic, Persian and Russian languages also had a great influence on the formation of the Uzbek anatomical terminology. The researcher also paid attention to the derivational aspects of the units of this field and determined that they are mainly made in a semantic-syntactic way. Z. Mirahmedova, along with the scientists before her, expressed her suggestions by specifically noting synonymy and differences in the spelling of terms as the biggest defects of the terminology of the field.

It is worth noting that in the above-mentioned studies carried out from 1967 to 1994, certain branches of medicine were studied as a separate object. For example, in DXBozorova's work - the names of human body parts, in A. Khusanovnik's - the names of diseases and their symptoms, in A. Kasimovnik's - drug names, in Z. Mirahmedova's - anatomical terms. From the linguistic point of view, semantic, morphological, etymological aspects and problems of terms are revealed in all of them. Each researcher was able to analyze these issues within the framework of his object and give his opinions. It should be noted that since 1994 there has been a period of stagnation in Uzbek linguistics regarding the study of medical terms. Looking at the chronology of the years of defended dissertations ( *see Figure 1* ), it is possible to witness that this break lasted 25 years.

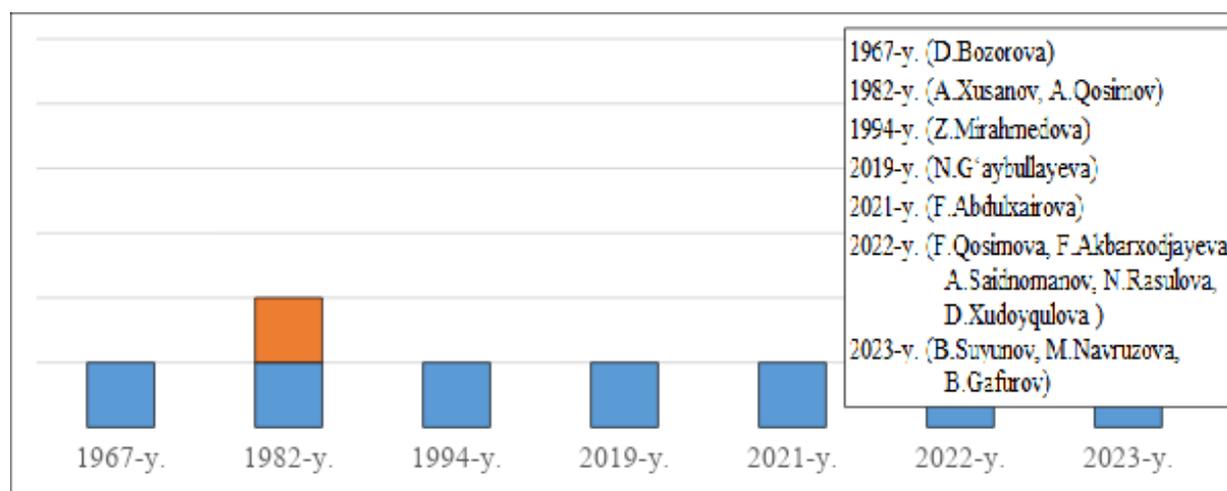


Figure 1. Chronology of these researched medical terms in Uzbek linguistics

Recently, there has been an increased focus on researching medical terms. On the one hand, we think that the adoption of the decree of October 21, 2019 "On measures to fundamentally increase the prestige and position of the Uzbek language as a state language", and on the other hand, the conditions of the pandemic in our country and the discoveries in medicine were most likely among the primary factors. . After all, it can be seen from Figure 1 that the interest of many linguists in researching the lexicon of this field has increased especially in the last two years. Also, it is noticeable that the approaches of linguists in researching medical terms have changed in these scientific researches. It should be noted that they are important because they cover modern directions of linguistics.

For example, N. Gaibullayeva's research on "Medical euphemisms in the Uzbek language (based on medical periodical publications)" [5] is dedicated to researching the linguistic and cultural aspects of field terms. In particular, the lexical-grammatical aspects of medical euphemisms, their use specific to the Uzbek people, and their unique manifestation in the communication between men and women have been studied. Also, in the article entitled "Linguistic features of medical euphemisms in the Uzbek language" co-authored by N. Gaibullayeva, medical euphemisms are classified into 12 thematic groups based on the materials of medical newspapers and magazines in the Uzbek language:

1. Euphemistic expressions that mean some physiological or physical process-state of a person.
2. Euphemisms related to death.
3. Euphemisms related to illness.

4. Euphemisms related to the names of incurable or incurable diseases.
5. Names based on diseases and special circumstances that are considered shameful by society.
6. Gender euphemisms.
7. Euphemisms used for intersex (male and female) relationships.
8. Genital euphemisms.
9. Euphemisms related to women's excuses (pregnancy, menstruation).
10. Euphemistic expressions for human body parts.
11. Euphemistic expressions for biomaterial.
12. Euphemistic expressions referring to human physical defects. [6, 205]

The scientist made a detailed study of the lexical units of the field and came to the conclusion that factors such as speech situation, social class, role, status, gender and age are important in determining the social characteristics of medical euphemisms .

The national-cultural characteristics of medical terms were also deeply studied in the dissertation "Metaphorical landscape of medical terms in the Uzbek language" [7] by F. Abdulkhairova. In the work, the laws of gradual development of medical term-metaphors from the time of their appearance in Uzbek language to the present, their relationship with other languages and the characteristics of the terms used in the works of the great thinkers Mahmud Kashgari and Abu Ali ibn Sina, who directly influenced these processes, are revealed. In addition, the cognitive and national-cultural characteristics of medical term-metaphors, the role of medical term-metaphors as an emotional-evaluative and experience-providing tool in the unification and regulation of medical terms have been revealed [7, 9]. This work is especially noteworthy for the fact that it incorporates the principles of creation of more than 3500 medical metaphors, a complex analysis of thematic and structural-semantic signs. As a result of the analysis, it was found that the majority of metaphors in work are accepted through negative connotations, there are almost no metaphors with a positive value or healing in the language, and the number of metaphors in practical medicine is also very small. On the one hand , the researcher cites the fact that the practice of preventive medicine has not been formed in the mind of the society; on the other hand, he notes that the understanding and practical application of medical metaphors goes back to the medical consciousness, medical understanding, medical skills, etc. formed in the society.

Also, our PhD research work on the topic "Uzbek-English medical terms and their linguistic and cultural research" [8] is dedicated to this issue. In it, about 5,000 medical terms in the Uzbek language are semantically and linguistically culturally compared to lexical units in the

English language, and their specific and general features are highlighted. As a result of in-depth analysis, the following features were found to be unique to Uzbek linguistic culture:

the units representing the names of the mystical healing person have preserved their "healing person" theme to this day;

the concept of "doctor" has a high status;

the importance of natural blessings, medicinal plants, cleanliness in health care is promoted in phraseological units in the Uzbek language;

the concept of "evil eye" exists, as a result of which units with the meaning of "pregnancy" are not verbalized in the language;

the developing fetus is metaphorically expressed through the "guest" linguoculture [8, 142-143].

F. Akbarkhodjayeva's dissertation on the topic "Linguostatistical study of borrowed terms related to the field of medicine (as an example of terms borrowed from Latin to Russian and Uzbek)" [9] highlighted the linguostatistical aspects of borrowed terms in derivational, structural-semantic, transformational aspects. Based on known dictionaries, it was determined that the total number of terms adopted into the Uzbek language is 2304 (100%) and that they mainly belong to the Greek and Latin languages. In the study of the nominative function of Latin terms in field terminological dictionaries, the method of quantitative qualitative analysis was used, and this was demonstrated by classifying these units into specific groups. In particular, diseases, pathological conditions - 19.8%; disease symptoms - 4.7%; disease causes (etiology) – 7%; anatomy and physiology - 27.2%; units of measurement in medicine - 0.9%; medical instruments, materials, equipment - 8.8%; diagnosis and treatment methods - 10.9%; medicines - 10.5%; biology - 4.4%; it was observed that inter-industry - 3.7%.

In the dissertation of A. Saidnomanov on "Uzbek language medical terminology and its lexicographical interpretation" [10], the terms of the field were studied in their own and assimilated layers. In the work, purely Uzbek (Turkish) medical terms and Uzbek medical terms formed syntactically with bases or additions belonging to other languages are used as terms of their own layer; and international terms borrowed from Arabic, Persian, Tajik, Russian and Western languages through the Russian language were divided into certain paradigms and studied as units of the acquired layer. In addition, various types of dictionaries incorporating Uzbek medical terms were discussed. For example, according to the scientist, "Bilingual translation dictionaries, firstly, have consistently reflected the development of terminology and terms, and secondly, they have served to introduce and explain medical terms to the general public" [10, 17]. As a basis for this, KK Yudakhin's "Brief Uzbek-Russian Dictionary" (1927), "Russian-Uzbek Perfect Dictionary" (1927), "Uzbek-Russian Dictionary" (1931), "Uzbek-Russian Dictionary" (1959), medical terms included in "Russian-Uzbek dictionary" (1983-

1984, 2013) were studied.

The principles of creating a dictionary of medical terms were developed in NARAsulova's dissertation on the topic "Principles of creating an educational dictionary of medical terms in the English-Uzbek languages (based on anatomical terms)" [11]. Including:

- The purpose and function, addressee of the dictionary should be determined;
- It is desirable to include about 3000 anatomical terms in the dictionary;
- In terminological dictionaries, words should be arranged alphabetically;
- Based on the structure of the dictionary as an explanatory translation dictionary, it is

important to explain the terms.

Also, the following principles of translation of anatomical medical terms in English into Uzbek language are proposed in the work: translation through monolexeme equivalents; translation through polylexem equivalents; translation by transliterative method; such as the translation of eponymous terms.

It is shown that the structure of the educational vocabulary can be made as follows:

- semantic nature of terms (terminological polysemy; terminological synonymy; terminological antonymy; terminological homonymy; grammatical nature of terms; of terms variation);

1. The main word is the name of the term;
2. Explanation in English;
3. Uzbek equivalent. [11, 146-147]

The lexicographic aspect of medical terms is also reflected in the dissertation of D. Khudoykulova on the topic "Lexicographic and functional-semantic study of pharmaceutical terms (in the case of English, Russian, Uzbek languages)" [12]. Although this research was carried out in a comparative section (that is, it focused on other languages besides Uzbek), but it enriched Uzbek linguistics, including Uzbek medical lexicography, with important information. In particular, the work analyzed the terminological criteria of pharmaceutical dictionaries, based on the practice of creating terminological dictionaries as a result of research, the following principles of creating a dictionary of pharmaceutical terms were proposed: it is necessary to have a field dictionary that covers the main pharmaceutical concepts in a certain field of science; it is required to be a translation dictionary intended for the general public, which includes pharmaceutical terminological units in the source language and the target language; according to its function, it should be normative (consists of a certain number of terms); in terms of volume, it is required to have a high capacity compared to existing dictionaries (it is considered a medium-sized dictionary); should include an actively used

terminological lexicon related to the field of pharmaceuticals [12, 16].

The issue of systematization of field terms based on computer technologies was studied in BTSuyunov's doctoral dissertation entitled "Semantics and thesaurus of medical terms" [13]. In it, the following semantic network thesaurus model of Uzbek medical terms was developed:

1. Morphological sign of the medical term (the purely linguistic aspects of the medical term are noted, i.e. the word form, structure, word group are determined).

2. Pronunciation.

3. Semantic structure: the semantic components of the medical term, the concept for which it serves, their meanings are reflected and relevant examples are also given. The semantic content includes the following points: a) the original meaning of the medical term: the real meanings understood from this term are intended. b) translational meaning: the translational meaning of this medical term (if any) is shown through examples.

4. Homonymy (if homonymy is present , it is explained through examples).

5. Synonym (if a synonym exists , it is given).

6. Antonym (if an antonym exists , it is given and explained).

7. Hyperonym (the general type (name) to which the medical term belongs is explained).
8. Hyponym (species (attributes) of the medical term are given).

9. Etymology (the origin and semantic development of the medical term is reflected).

10. Vocabulary units ( word units based on this term are presented).

11. Use in phraseological units: examples are given if the medical term is used in phraseological units.

12. Use in compounds : compounds based on medical terms are given.

13. Option in other languages: the translation of the medical term in Russian, English and advanced foreign languages is given [13, 21] .

This model is significant in that it is able to explain well the semantic characteristics of the medical terms of its class. These scientific materials served to create the linguistic support of the thesaurus of medical terms of the Uzbek language (Uzmedthesaurus). As a result, the medical lexicography of the Uzbek language is enriched with a very important source.

Regarding the study of medical units in the language of Uzbek folklore, M. Navruzova's research work on the topic "Ethnolinguistic and linguopoetic expression characteristics of medical units in the language of Uzbek folklore" [14] was discussed. In particular, the researcher recognized that metaphorical medical units are often observed in the language of Uzbek folklore samples and divided them into the following groups:

based on the names of body parts: abdomen, legs, head, head, lips, waist,...

based on the signifiers of clothes and their parts: brain tone, brain stitch, hearing border, belly fold, shoulder girdle;

household items used in everyday life, based on various object-object names: bladder, abdominal cavity, ear glass, hair dandruff, disease center, intestinal suction, etc.;

based on the combination of animal names and their body parts: such as brainworm, tiger heart, larynx, horsetail, fish coin, chicken meat ;

metaphors related to color: crimson tongue, gray shell of the brain, black, scarlet, yellow, yellow fever, yellow body, bluish, pink iron, black, scaly body, scab, black lame, yellow spotted, white sick [14, 20] .

Also, in the dissertation, it is proposed to name medical terms in the style of "medical names" and they are defined as follows: "Such linguistic units are united in the form of a specific lexical system and form macro and micro semantic fields. Each has a structural-semantic structure, a stylistic-functional task. It often attracts attention in terms of its national-cultural, derivational character. Sometimes it appears as *linguokulturema*" [14, 24] . It should be noted that this definition of M. Navruzova is completely in common with the opinions of scientists who conducted research in this field before her. However, the case of naming lexical units related to medicine as *medionyms is not evident in previous works*. Perhaps this issue is somewhat controversial. For example, the proposed new name is not derived from its own layer of the Uzbek language. But from the other side, taking into account the presence of international names such as zoonym, ornithonym, anthroponym, toponym in linguistics, it is also appropriate to call it in a medionym way. After all, medisionim has a more compact appearance than the two-word "medical term". In this respect, we can say that this dissertation is one of the studies covering important issues in the study of medical terms in Uzbek linguistics.

In addition, B. Gafurov has carried out another large monographic study on the study of field terms. By identifying the functional-semantic aspects of the medical lexicon in the advertising discourse in his doctoral thesis ( DSc ) on the topic "Medical lexicon in advertising discourse: functional-semantic and linguistic-cultural aspects (in the case of Russian and Uzbek languages) " [15] their place in language and speech, linguistic, national-cultural, linguo-cultural, linguo-pragmatic, linguo-didactic, linguo-cognitive and communicological features are highlighted. For example, the following points in the study deserve special recognition:

The advertising text containing medical terminology is enriched based on the morphological possibilities of the Russian and Uzbek languages . In particular, the editors of advertising texts use the imperative form of verbs, the time difference between the number of words in order to show the amount, volume, and dose of pharmaceutical drugs, the time of taking drugs, the adverbial phrase is used to show; with the help of the medical lexicon, the names of diseases expressed in the popular colloquial style are replaced by alternative options, because their stylistic and semantic content is limited by the fact that they cannot be said in front of the public, morally and aesthetically; the most active medical lexical units

reflected in the advertising texts of the medical services and pharmaceutical fields are mostly borrowed from Turkish, Persian, Tajik, Arabic, English and Russian languages; advertisements intended for women often use words related to the fragility, weakness, delicacy and beauty of female nature, including medical lexicon; in advertising texts intended for men, only words and expressions representing personal qualities of the stronger sex are chosen: self-confidence, courage, willpower, risk-taking in actions, etc. [15, 18-25].

In general, from the information presented above, it is clear that medical terms are a hot topic in the attention of linguists. At first, their interest was focused on medical terms in separate branches of medicine, but later it changed to the study of lexical units related to medicine mainly within the framework of modern trends of linguistics. For example, researching the dissertations written to date, it was found that the semantic features of medical terms are the most studied in them (*see Figure 2*):

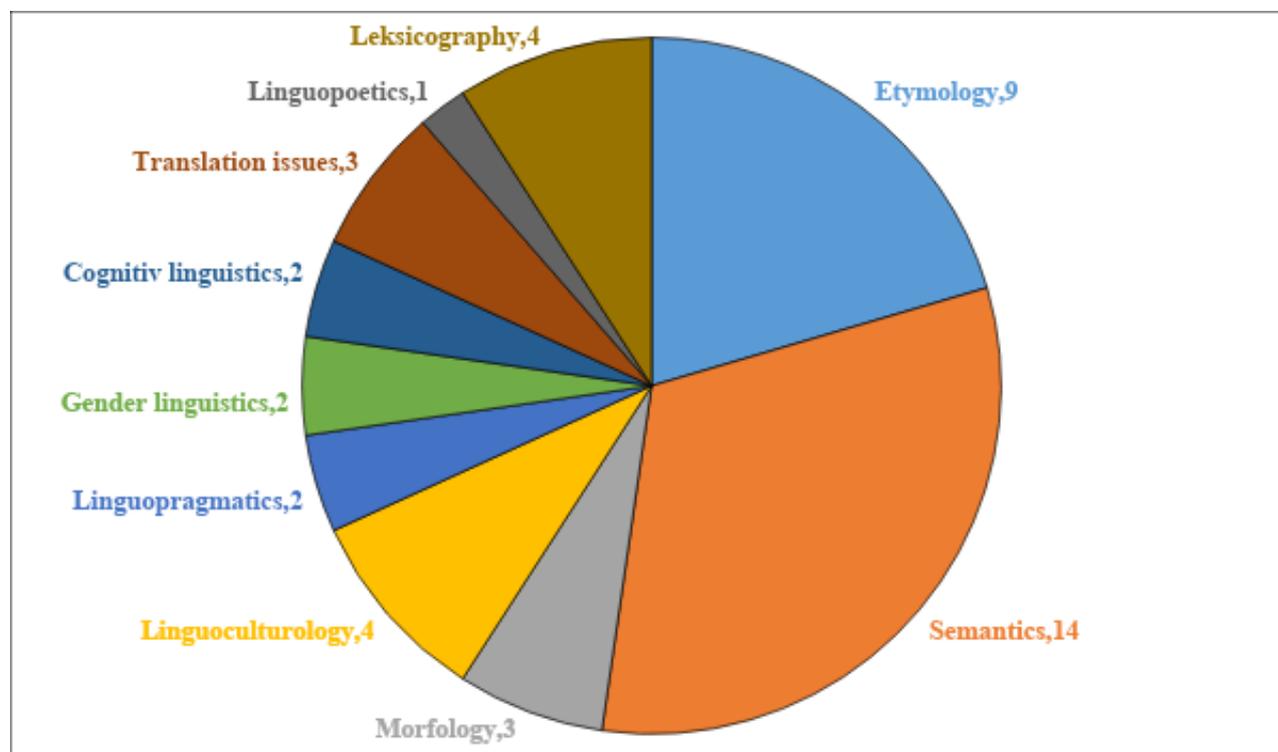


Figure 2. Fields of linguistics in which medical terms in Uzbek linguistics have been studied on a monographic scale (1967-2023)

It is clear from this that the aspect of meaning and content of medical terms is considered the most important issue in the attention of researchers. In our opinion, the study of these features of medical terms will better serve to solve such huge problems as synonymy, homonymy, and polysemy in the terminological system.

### Conclusion

As time, day, month, year passes, everything around does not stand still, it is formed. Thus, the

field of medical terminology has experienced a gradual development as a result of research carried out within one or another branch of linguistics. Although a lot of research has been done on medical terms, it has been argued that there are still many aspects that have not been analyzed and studied enough.

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