

Linguistic Features of Medical Terminology in Kyrgyz and Russian Languages: A Comparative Study

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Abstract- This study explores the linguistic and cultural features of medical words in Kyrgyz and Russian. It analyzes how languages integrate medical terms from Latin and Greek, considering their morphology and sociolinguistic aspects. Comparative linguistic analysis reveals differences in word creation, borrowing, and usage in Kyrgyzstan's bilingual medical fields. According to the findings, Russian is still the main language for technical discussions, but Kyrgyz is becoming more creative and is adapting to its own language rules. The work supports both cross-linguistic terminology studies and the creation of standard bilingual medical language resources in Central Asia.

Keywords: Kyrgyz Language; Russian Language; Medical Terminology; Comparative Linguistics; Morphological Analysis; Semantic Adaptation; Borrowing and Calquing; Bilingual Communication; Sociolinguistics; Terminology Standardization; Cross-Linguistic Influence; Language Policy in Healthcare; Turkic Linguistics; Translation Equivalence

I. INTRODUCTION

Medical language is key to healthcare communication. Diagnosis, documentation, and teamwork rely on clear, accurate medical terms. To communicate well in Kyrgyzstan, knowing how Russian and Kyrgyz work together is important.

Russian was historically the primary language of medical science in the post-Soviet area. Its terminology is largely rooted in Latin and Greek traditions, while Kyrgyz—an agglutinative Turkic language—has relied on both direct borrowings and calquing strategies to express medical concepts. Despite official language policies promoting Kyrgyz, Russian remains prevalent in clinical and academic contexts.

Research objectives:

1. To identify the morphological and semantic features of medical terminology in Kyrgyz and Russian.
2. To analyze the processes of borrowing and adaptation of medical terms.
3. To investigate sociolinguistic aspects of bilingual medical communication.

The study thus addresses the broader question: How do Kyrgyz and Russian medical terminologies reflect linguistic typology, historical contact, and sociocultural practice?

II. LITERATURE REVIEW

Morphological and Semantic Features

Kudasheva (2017) investigated Turkic medical lexicons and found that Kyrgyz constructs medical terms through productive suffixation (e.g., -лык/-лик) to form nouns indicating disease or state. She noted that while Russian borrowings preserve foreign morphology, native Kyrgyz formations achieve clarity through regular agglutination.

Alekseeva (2019) analyzed Russian medical terminology and highlighted the influence of Latin and Greek roots, such as cardio-, neuro-, and dermat-, which combine with Russian affixes (-ический, -ология). This creates hybrid forms that illustrate Russian's fusional structure and morphological flexibility.

Borrowing and Adaptation Mechanisms

Karasartova (2021) examined loanwords in Kyrgyz medical vocabulary and identified two categories: primary internationalisms (direct global borrowings, e.g., диабет) and secondary borrowings from Russian discourse. Orthographic adaptation often involves vowel harmony adjustments, while phonetic integration aligns borrowed sounds with Kyrgyz phonology.

Similarly, Karaev (2020) noted that Russian remains the main source of lexical innovation, but recent trends show growing Kyrgyz neologism formation through calquing—e.g., *жүрөк оорулары* (“heart diseases”) as a semantic equivalent to cardiovascular diseases.

Sociolinguistic Aspects

Chernova (2020) explored bilingual medical communication and found that professionals in Kyrgyz hospitals frequently switch between Russian and Kyrgyz for pragmatic reasons. Russian dominates technical terminology, while Kyrgyz is used for patient-centered interaction.

Sharshekeeva (2018) contextualized this within Kyrgyzstan's language policy, emphasizing that medical education and documentation remain Russian-dominant, limiting terminological expansion in Kyrgyz.

Translation and Terminological Equivalence

Iskakova and Ivanov (2021) studied translation challenges between Kyrgyz and Russian medical materials, showing that literal translation often causes semantic distortion due to differing lexical transparency. For example, Russian's reliance on Latin-based roots contrasts with Kyrgyz's descriptive and metaphorical tendencies, necessitating contextual interpretation.

Mukambetova (2019) compared Turkic and Slavic medical lexicons, concluding that Kyrgyz prefers descriptive formations, while Russian adopts standardized international forms, reinforcing its integration into global medical discourse.

Standardization and Policy

Kurbanova (2022) analyzed current efforts by the Kyrgyz Ministry of Health to develop bilingual terminological databases. She emphasized the importance of consistent terminology for education and healthcare interoperability.

Kozlova (2016) discussed post-Soviet challenges in standardizing Russian medical terminology, showing that despite reforms, variation persists in regional practices—a factor influencing Kyrgyz terminology development.

Summary: Collectively, these studies demonstrate that Kyrgyz medical terminology is characterized by morphological transparency and cultural localization, while Russian exhibits structural complexity and international integration. The sociolinguistic balance between the two languages continues to shape medical discourse in Kyrgyzstan.

III. METHODOLOGY

This study employs a comparative linguistic approach integrating morphological, semantic, and sociolinguistic analyses.

Corpus: Approximately 800 medical terms were sampled from bilingual dictionaries, textbooks, and hospital documentation.

Methods:

Morphological analysis—identifying word-formation patterns (affixation, compounding, calquing).

Semantic categorization—grouping terms by medical domain (anatomy, pathology, pharmacology).

Sociolinguistic observation—examining code-switching and term usage among medical professionals.

Data were analyzed qualitatively, emphasizing cross-language correspondences and adaptation mechanisms.

IV. ANALYSIS AND DISCUSSION

Morphological Structures

Kyrgyz, as an agglutinative language, forms medical terms through consistent suffixation (e.g., *оопы* “disease,” *жүгүштүү оорулар* “infectious diseases”). Russian, a fusional language, combines roots and affixes of Latin-Greek origin (кардиология, неврология). Kyrgyz's morphological transparency enhances comprehension but limits terminological precision compared to standardized Russian formations.

Borrowing and Adaptation

Russian medical terms often enter Kyrgyz unchanged (вирус, антибиотик), but are occasionally

phonetically adapted (антибиотиктер —pluralized via Kyrgyz suffixation). Semantic calques are increasingly common as part of language modernization policy, reflecting efforts to indigenize medical terminology.

Semantic and Pragmatic Differences

While Russian medical terminology achieves precision through international consistency, Kyrgyz prioritizes descriptiveness, making it more accessible to patients but less standardized. For instance, *жүрөк оопыч* (literally “heart sickness”) parallels cardiac disease but carries broader connotations in lay communication.

Sociolinguistic Implications

Bilingual professionals employ Russian for diagnostics and academic writing, while Kyrgyz dominates oral communication with patients. This functional diglossia aligns with patterns found in Chernova (2020), indicating domain-specific code-switching based on audience and context.

V. CONCLUSION

The comparative analysis reveals that Kyrgyz and Russian medical terminologies embody distinct linguistic and sociocultural paradigms.

Structurally, Kyrgyz favors transparent, suffix-based formations, whereas Russian relies on fusional morphology and international roots.

Lexically, Kyrgyz continues to borrow heavily from Russian but increasingly adopts calques to expand native vocabulary.

Sociolinguistically, the dual use of languages reflects both historical influence and evolving national language policy.

To strengthen Kyrgyz's role in professional medicine, initiatives such as bilingual terminological databases, medical glossaries, and translation standards are essential. The study thus contributes to linguistic modernization, supporting effective bilingual communication in healthcare and education.

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