Peculiarities of Perceiving Russian Speech by Indian Students of Medical Universities

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ABSTRACT

Background: More Indian students now head to Russian-speaking nations for medical training, bringing fresh hurdles in language acquisition. Listening comprehension is particularly challenging when the mother tongue differs substantially in phonetic and grammatical structure from Russian.

Objectives: To identify the main linguistic and cognitive barriers affecting listening comprehension and oral communication among Indian students of medical universities studying Russian as a foreign language.

Methods: Forty Indian medical students in years one and two of Russian language courses participated. Data were collected through listening comprehension tests, classroom observation, structured student questionnaires, and error analysis of listening exercises.

Results: Key challenges included phonetic distinctions absent in native languages, rapid natural speech tempo, unfamiliar intonation patterns, specialized medical vocabulary, and interference from first-language phonological systems. Limited exposure to authentic Russian speech further compounded difficulties.

Conclusions: Teaching strategies should incorporate systematic phonetic preparation, progressive exposure to natural speech, and specialized listening exercises grounded in medical communication contexts. These findings can inform improved methods for teaching Russian as a foreign language in multicultural medical education settings.

Keywords: *Russian as a foreign language; speech perception; Indian students; medical education; listening comprehension; phonetic interference; intercultural communication*

АННОТАЦИЯ

Увеличение числа иностранных студентов, изучающих медицину в русскоязычных странах, создаёт новые вызовы в преподавании русского языка как иностранного. Одной из наиболее значимых трудностей является восприятие и понимание устной русской речи студентами, чей родной язык существенно отличается по фонетической и грамматической структуре.

Результаты исследования показывают, что фонетические различия, темп речи, непривычные интонационные модели и специализированная медицинская лексика существенно влияют на уровень понимания. Стратегии преподавания должны включать фонетическую подготовку, постепенное знакомство с естественной речью и специальные упражнения на аудирование, связанные с медицинской коммуникацией.

1. INTRODUCTION

Nowhere is the shift in global learning more evident than in how students move across borders for higher education, especially those studying medicine. Students from India often head to Russia and neighboring regions because medical schools there offer strong training without heavy price tags. Because of this migration pattern, universities must develop effective strategies to teach Russian to learners who speak a wide variety of first languages.

Spoken language comprehension is particularly challenging when acquiring a new language. For international medical students, accurately understanding speech is critically important — it shapes how well they follow lectures, communicate in clinical environments, and participate in practical training. Gaps in listening comprehension can slow down learning in contexts where speed and accuracy carry high stakes.

Russian speech presents particular difficulties for Indian learners. Hindi, English, and regional languages shape how the ear calibrates to new sounds. Rhythmic differences between languages disrupt timing expectations. Stress placement differs from what learners anticipate, making words harder to decode. Intonation contours do not match familiar patterns, and grammatical structure adds further confusion. Unfamiliar lexical choices compound the perceptual burden.

Despite rising enrollment of Indian students in Russian medical universities, little research has examined how

these learners process spoken Russian. Their specific listening comprehension challenges remain under-studied, and teaching methods rarely account for the way Indian students hear and interpret Russian pronunciation and rhythm. Without deeper insight into these difficulties, educational support remains inadequate. This study aims to close that gap.

2. MATERIALS AND METHODS

The study was conducted at a medical university offering Russian language instruction for international students. Participants included Indian students enrolled in either preparatory or core language courses, spanning early stages of medical education. Forty students aged 18–23 years participated, with 6–12 months of prior Russian language study. All participation was voluntary and responses were kept confidential.

Data were collected using four complementary methods:

1. **Listening Comprehension Tests.** Students listened to recorded Russian conversations covering academic and everyday contexts, then answered questions targeting main ideas, directions, medical terminology, and key details. Tasks focused on genuine understanding rather than surface-level guessing.
2. **Classroom Observation.** The study tracked moments of comprehension breakdown during student–instructor and peer interactions. Close attention was paid to patterns of misheard phrases, misunderstood cues, and situations where pacing or delivery caused learning to stall.
3. **Student Questionnaires.** Structured forms gathered students' self-reported perceptions of the most challenging aspects of listening to Russian speech. Responses revealed patterns around specific types of difficulty, including rapid tempo, unfamiliar sounds, and specialized vocabulary.
4. **Error Analysis.** Mistakes made during listening exercises were reviewed to identify systematic patterns, revealing where comprehension most frequently broke down and what underlying perceptual issues were responsible.

Collected data were analyzed using descriptive statistics alongside qualitative approaches, combining observation-based findings with numerical summaries to produce a comprehensive picture of listening comprehension challenges.

3. RESULTS

Findings identified five main factors shaping how Indian medical students perceive Russian speech:

3.1 Phonetic Difficulties

Many students experienced difficulties distinguishing Russian sounds absent in their native languages. Confusion was most pronounced with consonant distinctions and vowel reduction in unstressed syllables — features with no direct equivalent in Hindi or English phonological systems.

3.2 Speech Tempo

Students consistently reported that natural Russian speech felt too fast. Rapid delivery made it difficult to segment sentences and identify individual words, particularly when sounds merged across word boundaries in connected speech.

3.3 Intonation Patterns

Russian intonation differs significantly from patterns typical of English or Hindi. As a result, students sometimes misinterpreted the communicative intention of a speaker — for instance, failing to recognize questions, commands, or emphatic statements.

3.4 Specialized Medical Vocabulary

Medical terminology presented additional challenges beyond general vocabulary. Students often recognized everyday Russian words but struggled to decode specialized professional terms encountered in lectures and clinical role-plays, where context alone was insufficient for meaning recovery.

3.5 Influence of Native Language

Interference from students' native languages — primarily Hindi, but also regional Indian languages — affected real-time comprehension. Some students relied on English as an intermediary language during processing, which slowed perception of spoken Russian and introduced further errors.

4. DISCUSSION

These findings align with established research on second language listening comprehension, which consistently links difficulties to sound recognition, speech rate, and word familiarity. The current results confirm that comprehension difficulties for Indian learners of Russian are not reducible to a single factor; rather, they arise from the interaction of phonological, prosodic, lexical, and experiential variables.

The challenge of distinguishing reduced vowels and consonant clusters reflects a well-documented feature of Russian phonology that presents particular difficulty for learners whose native sound systems lack equivalent contrasts. Without targeted phonetic training, students rely on approximations that undermine word recognition in natural speech.

Limited exposure to authentic Russian outside the classroom compounds all other difficulties. Without regular contact with native speakers, students do not develop the perceptual fluency needed to handle variation in tempo, regional accent, or informal speech style. Classroom input alone is insufficient to bridge this gap.

The findings also highlight the role of medical context in listening difficulty. Exposure to authentic medical dialogues — doctor-patient conversations, clinical consultations, case presentations — provides learners with the contextual anchors needed to infer meaning from specialized vocabulary. When classroom activities mirror real clinical moments, students build recognition of professional language through repeated, meaningful exposure rather than isolated memorization.

Taken together, these results point toward pedagogical approaches that treat listening not as a passive skill but as an active, trainable process. Interactive methods emphasizing communicative practice over grammar-only instruction, together with progressive exposure to natural speech in professionally relevant contexts, are likely to produce the strongest improvements in listening comprehension among this population.

5. CONCLUSION

This study examined how Indian students at medical universities perceive and comprehend spoken Russian, identifying a consistent set of challenges that go beyond individual sounds or vocabulary gaps. Fast delivery disrupts word segmentation even when individual items are familiar. Unfamiliar intonation contours lead to misinterpretation of communicative intent. Specialized medical terminology adds a further layer of difficulty when contextual support is limited. Native language interference slows real-time processing, and restricted exposure to authentic Russian limits the perceptual fluency students need to handle natural speech.

Addressing these challenges requires systematic changes to how Russian language instruction is delivered in medical education settings. Phonetic training should be integrated as a core component rather than an add-on. Authentic spoken materials — including medical dialogues and clinical communication scenarios — should be embedded progressively throughout courses. Listening exercises should be tied explicitly to the professional contexts students will encounter as future clinicians.

A stronger command of spoken Russian directly supports academic performance and prepares students for the real-world clinical communication they will need when working alongside Russian-speaking doctors and patients. Future research directions include developing and testing technology-supported learning tools — including adaptive digital platforms and interactive software — that provide individualized, responsive listening practice for globally mobile medical students.

ETHICAL STATEMENT

All participants were informed about the purpose of the study and voluntarily agreed to participate. The research ensured the anonymity and confidentiality of all respondents. The authors declare no conflict of interest.

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