



PSYCHOLINGUISTIC ANALYSIS OF SPEECH COMMUNICATION
DISORDERS IN MOTOR APHASIA

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Abstract: Motor aphasia is a complex language disorder characterized primarily by impaired speech production following damage to the brain regions responsible for language organization and motor planning. This article examines motor aphasia from a psycholinguistic perspective, focusing on the relationship between linguistic processes, cognitive mechanisms, and communicative behavior. Particular attention is given to difficulties in spontaneous speech, word retrieval, grammatical organization, repetition, and verbal interaction. The analysis demonstrates that motor aphasia affects not only the ability to pronounce words but also the processes of lexical selection, syntactic construction, and organization of coherent speech. Uzbek-language studies indicate that patients with Broca-type aphasia may experience particular difficulties with verbs, auxiliary verbs, participial forms, tense and aspect markers, and other grammatical structures. The psycholinguistic approach therefore provides an important framework for understanding the interaction between language and cognition in aphasic speech. The findings emphasize the importance of individualized speech-language rehabilitation that combines linguistic, cognitive, and communicative exercises.

Keywords: motor aphasia, Broca's aphasia, psycholinguistics, speech communication, language production, lexical retrieval, syntax, neurolinguistics, speech disorders, rehabilitation.

Speech communication is a complex cognitive process that requires the coordinated functioning of linguistic, psychological, and neurological



mechanisms. During normal communication, a person must formulate an intention, select appropriate lexical units, construct a grammatical structure, organize sounds, and produce understandable speech. Damage to the brain can disrupt one or several of these stages. One of the most significant acquired language disorders associated with brain damage is aphasia. Motor aphasia, commonly associated with Broca's aphasia, is primarily manifested through difficulties in producing fluent and grammatically organized speech. A person may understand relatively simple spoken language but experience considerable difficulties when attempting to express thoughts verbally. Speech can become slow, effortful, fragmented, and characterized by reduced grammatical complexity. From a psycholinguistic perspective, these characteristics demonstrate that speech production involves several interconnected stages rather than a single mechanical process. Research conducted in Uzbekistan has increasingly addressed aphasia from linguistic and neurolinguistic perspectives. In particular, Azimova's study of Uzbek Broca's aphasia analyzed spontaneous speech, naming of objects and actions, and the production of tense and aspect forms among individuals with brain damage. The study demonstrated that difficulties with verb production in Uzbek Broca's aphasia are related to argument structure and predicativity, while certain auxiliary verbs and functional verb forms may also be affected [1].

Motor aphasia can be understood as a disorder involving the production and organization of language. The impairment may occur at different stages of speech production, including lexical retrieval, grammatical encoding, phonological organization, and motor implementation. One of the most noticeable characteristics is reduced verbal fluency. Individuals with motor aphasia may know what they want to communicate but have difficulty transforming their communicative intention into an appropriate sequence of words. This creates a significant difference between conceptual knowledge and verbal expression. Psycholinguistically, the problem can therefore be



interpreted as a disruption in the mechanisms that connect conceptual representations with linguistic forms. Lexical retrieval is another important component. A patient may recognize an object but fail to produce its name quickly. Such difficulties can result in pauses, repetitions, circumlocutions, or substitution of one word for another. These phenomena demonstrate that communication difficulties in motor aphasia cannot be explained solely by problems of articulation [2].

Grammatical organization is also frequently affected. Speech may contain simplified sentence structures, omission of grammatical elements, and difficulties with morphological markers. In an agglutinative language such as Uzbek, grammatical information is frequently expressed through affixes, auxiliary constructions, and functional forms. Consequently, impairment of these elements can substantially influence the organization of spontaneous speech. Communication in motor aphasia is affected at several interconnected levels. At the phonological level, patients may have difficulties organizing the sequence of sounds required for a word. At the lexical level, they may experience problems retrieving appropriate words. At the syntactic level, sentence construction can become simplified. At the communicative level, these linguistic difficulties may reduce the person's ability to participate effectively in dialogue. Spontaneous speech is particularly informative for psycholinguistic analysis because it reveals how language is organized in relatively natural communicative conditions. Patients may produce short utterances and rely heavily on familiar words and constructions. They may also omit function words or grammatical markers while attempting to preserve the general meaning of their message. Another characteristic is the discrepancy between automatic and voluntary speech. Some individuals may be able to produce familiar sequences more easily than newly constructed sentences. This phenomenon suggests that different linguistic tasks may place different demands on lexical retrieval, planning, and cognitive control. The



communication partner also plays an important role. Because motor aphasia can make speech production effortful, patients may experience difficulties maintaining conversations. Therefore, effective rehabilitation should not focus exclusively on isolated sounds or words but should also address meaningful communication [3].

Lexical processing represents one of the central problems in motor aphasia. Word retrieval requires activation of a conceptual representation, selection of an appropriate lexical item, and organization of its phonological form. Damage to language-related neural networks can interfere with one or more of these stages. The Uzbek-language evidence is particularly valuable because languages differ in how grammatical information is encoded. Azimova's 2024 research involving 11 individuals with brain damage found that Uzbek Broca's aphasia did not demonstrate a simple noun-verb dissociation. However, difficulties were evident in the use of auxiliary verbs, functional verb forms, certain tense forms, and aspectual constructions. The author associated these difficulties with the argument structure and predicativity of verbs. This finding demonstrates why psycholinguistic analysis should consider the structural characteristics of a particular language. A diagnostic method developed primarily for languages with different grammatical systems may not fully capture the specific manifestations of aphasia in Uzbek speakers [4].

Motor aphasia is not limited to linguistic impairment. Speech production is closely connected with attention, working memory, executive control, and planning. When these cognitive processes are affected, the organization of verbal communication can become more difficult. Working memory is particularly important because speakers must temporarily maintain words and grammatical structures while constructing an utterance. If this process becomes less efficient, the speaker may produce shorter sentences or omit linguistic



elements. Attention also influences communication. A person with aphasia may find it difficult to follow a complex conversation, especially when several pieces of information are presented simultaneously. Therefore, psycholinguistic assessment should examine both linguistic performance and the cognitive conditions under which communication takes place. Research on post-stroke rehabilitation in Uzbekistan also emphasizes the relationship between speech recovery, psychological support, and quality of life. Mahkamova's 2024 study specifically discusses the relationship between speech disorders and quality of life during rehabilitation after stroke and identifies aphasia, including motor and sensory forms, among the relevant communication disorders.

The psycholinguistic analysis of motor aphasia indicates that speech communication disorders can be grouped into several interconnected areas. The first is lexical difficulty, manifested through problems with word retrieval and naming. The second is grammatical difficulty, including reduced sentence complexity and problems with grammatical forms. The third is phonological difficulty, which can affect the organization of speech sounds. The fourth is communicative difficulty, which becomes evident when a person attempts to participate in spontaneous dialogue [5].

Conclusion

Motor aphasia represents a multidimensional disorder in which neurological damage affects linguistic production and communicative behavior. Its psycholinguistic analysis demonstrates that difficulties are not limited to articulation. Problems may occur during lexical retrieval, grammatical encoding, phonological organization, sentence construction, and spontaneous communication. The analysis of Uzbek Broca's aphasia is particularly important because the grammatical structure of Uzbek influences the manifestation of language impairment. Research findings indicate

significant difficulties involving verbs, auxiliary constructions, functional verb forms, tense, aspect, and predicative structures. A psycholinguistic approach allows these difficulties to be examined as interconnected processes of language and cognition. Therefore, assessment and rehabilitation should combine linguistic testing with analysis of cognitive and communicative functions. Individualized rehabilitation, meaningful dialogue, lexical-semantic exercises, grammatical training, and contextual speech activities can contribute to more effective restoration of communication abilities.

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