

JEPAL

Journal of English Pedagogy and Applied Linguistics

<https://www.jurnal.masoemuniversity.ac.id/index.php/englishpedagogy>

Submitted: 14 May 2026 Revised: 21 July 2026 Accepted: 1 August 2026 Available Online: 1 August 2026

A COMPARATIVE ANALYSIS OF SPEECH PRODUCTION IN MALE AND FEMALE BROCA'S APHASIA SURVIVORS

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Abstract: This study aims to analyze the characteristics of speech production and communication strategies in two Broca's aphasia survivors of different genders, Sarah Scott and Mike Caputo. This research employs a qualitative method with a comparative descriptive approach. Data were obtained from two YouTube videos uploaded in 2017 and analyzed through a process of observation, transcription, identification, and interpretation of linguistic data. The study focuses on speech production characteristics such as non-fluent speech, telegraphic speech, disfluency, pauses, hesitation, and word-finding difficulties, as well as the communication strategies employed by both subjects to maintain social interaction post-stroke. The results indicate that both subjects exhibit the core characteristics of Broca's aphasia, manifested as non-fluent speech, simplified sentences, and word-finding difficulties. However, discrepancies emerge regarding their levels of communicative fluency and the strategies utilized. Sarah Scott demonstrates a more independent communication pattern through the use of gestures, self-repair, repetition, and active communication practice within an aphasia community. Conversely, Mike Caputo relies more heavily on his wife's assistance to co-construct communication. This study demonstrates that the communicative recovery process in Broca's aphasia patients is modulated by neurological factors, social support, communication practice, and the social environment. This research proves that social media platforms like YouTube can serve as valuable sources of authentic data in neurolinguistic studies.

Keywords: Broca's aphasia survivors, communication strategies, neurolinguistics, speech production, YouTube

INTRODUCTION

The ability to speak, use language, and convey information is a vital part of human life, it's regarded as a fundamental skill that every individual should naturally possess. Through language, one can express thoughts, feelings, and needs,

as well as build social relationships with those around them. Effective communication allows individuals to live more fulfilling and meaningful lives. However, for some individuals experiencing neurological disorders, these abilities can be impaired, making simple activities such as speaking and conveying information a significant challenge. This condition demonstrates that language is not merely a tool for communication, but also a crucial component of human identity and quality of life (Levelt, 1989).

One of the most common language disorders resulting from neurological damage is Broca's aphasia. Broca's aphasia is a language impairment that affects the ability to produce speech due to damage to Broca's area in the human brain (Broca, 1861). Broca's area plays a critical role in language production, particularly in sentence structure, articulation, and speech fluency. According to the classical neurolinguistic theories of Broca and Wernicke, damage to this area causes an individual to experience difficulty producing fluent speech, even though their language comprehension remains relatively intact (Wernicke, 1874). Consequently, patients with Broca's aphasia generally understand what they want to say but struggle to express it verbally to their interlocutors.

This disorder can be caused by various factors, such as traumatic brain injury, brain tumors, neurological infections, or strokes. Stroke is one of the most common causes of Broca's aphasia, as it can damage brain tissues responsible for language production (NIDCD, 2024). This article attempts to further explore Broca's aphasia through two individuals, Sarah Scott and Mike Caputo, who suffered from the condition due to strokes and were identified through social media. By selecting one video from each subject, both uploaded to YouTube in 2017, this study observes and analyzes their communication. These videos illustrate how they strive to speak, convey meaning, and employ various communication strategies in their daily lives years after their strokes.

In the fields of psycholinguistics and neurolinguistics, research on Broca's aphasia typically focuses on clinical aspects, speech therapy, or linguistic analysis within medical environments. Previous studies have examined general characteristics of Broca's aphasia patients, such as agrammatism, telegraphic speech, disfluency, and word-finding difficulties (Mulia and Indah, 2021). Hattab (2023) explain that individuals with non-fluent aphasia often produce short and effortful utterances, omit grammatical elements, and experience difficulties retrieving intended words during communication. They further state that aphasia patients frequently rely on pauses, incomplete sentence structures, and general wording when they fail to recall specific vocabulary items. Other research has discussed communication strategies used by aphasia patients to maintain social interaction, including the use of gestures, word repetition, self-correction, and assistance from the listener (Bialystok, 1990). However, research utilizing authentic data from social media, particularly YouTube, remains relatively limited. Furthermore, studies comparing the representation of speech production and communication strategies between two Broca's aphasia patients of different genders are still rare.

Given these circumstances, this study offers novelty by using YouTube videos as authentic data sources to analyze speech production and communication strategies in two Broca's aphasia patients of different genders. This research not only observes the emerging characteristics of the language disorder but also compares how both subjects express their linguistic difficulties, demonstrate communication progress,

and utilize specific strategies to maintain social interaction post-stroke. Additionally, this study considers factors such as age, gender, and recovery conditions that may influence how each individual communicates.

Based on this background, this study aims to understand how both subjects produce speech following a stroke, including the types of linguistic difficulties that arise, such as long pauses, incomplete sentences, and word-finding struggles. Furthermore, this research examines the communication strategies employed by both survivors to maintain interaction and convey meaning in their daily communication. Through a comparative analysis of their videos, this study seeks to observe how differences in individual conditions, gender, age, and the recovery process may influence the representation of communication in individuals with Broca's aphasia.

This research is expected to contribute to the fields of neurolinguistics and psycholinguistics, particularly in understanding the representation of language production disorders in Broca's aphasia patients through authentic communication data on social media. Furthermore, it aims to increase public understanding of the complexities of language disorders caused by stroke and the importance of communicative support for Broca's aphasia survivors.

LITERATURE REVIEW

Neurolinguistics and Broca's Aphasia

Neurolinguistics provides a theoretical framework for understanding how brain damage influences language production and comprehension. It explains the interaction between cognitive-linguistic processing and spoken language output rather than focusing solely on neurological impairment (Levelt, 1989). Within this framework, Broca's aphasia represents one of the most extensively investigated disorders because it primarily disrupts speech production while relatively preserving language comprehension (Fridriksson and Hillis, 2021). According to the classical theories of Broca and Wernicke, Broca's area plays a vital role in language production, particularly in the organization of sentence structure and speech articulation (Broca, 1861; Wernicke, 1874). Damage to this area causes patients to experience difficulty producing fluent speech, despite their language comprehension abilities remaining relatively intact.

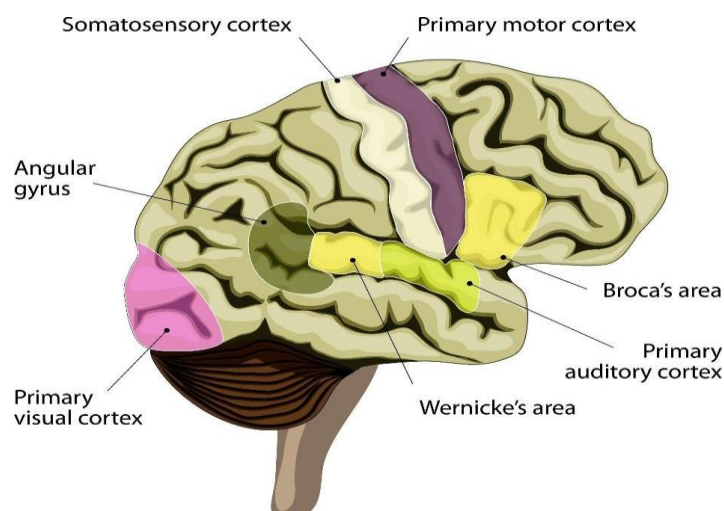


Figure 1. Parts of the brain

Patients with Broca's aphasia typically exhibit several key characteristics, such as agrammatism, telegraphic speech, disfluency, and word-finding difficulties (Hattab, 2023). Agrammatism is a condition in which an individual is unable to use complete grammatical structures, resulting in speech that tends to be short and incomplete. Furthermore, patients often speak slowly with long pauses due to the difficulty of producing the intended words. According to Levelt (1989), the process of speech production involves the stages of conceptualization, formulation, and articulation. In patients with Broca's aphasia, the impairment occurs primarily at the formulation and articulation stages, meaning that understood ideas cannot be smoothly conveyed in the form of verbal speech. Hattab (2023) further explain that non-fluent aphasia patients tend to produce short, fragmented, and effortful speech.

In this study, neurolinguistic theory is used to understand how Sarah Scott and Mike Caputo produce language following their strokes. Analyzing the speech patterns, pauses, repetitions, and sentence structures used by both subjects is essential to identifying the characteristics of speech production in Broca's aphasia patients. Thus, neurolinguistic theory serves as the conceptual foundation for identifying the forms of language impairment present in both research subjects.

Speech Production in Broca's Aphasia Patients

Speech production is the process through which an individual conveys ideas, information, and meaning via spoken language (Levelt, 1989). Under normal conditions, this process occurs automatically and rapidly. However, in patients with Broca's aphasia, speech production capabilities are impaired, leading to disfluent communication. This impairment is usually visible through short, fragmented speech, filled with long pauses before a word is successfully uttered (Hattab, 2023).

According to Levelt's (1989) theory of language production, the process of producing speech consists of three main stages: conceptualization, formulation, and articulation. Conceptualization involves the formation of the idea to be conveyed; formulation involves the organization of the linguistic structure; and articulation involves the process of uttering the speech. In Broca's aphasia patients, neurological damage causes disruptions at the formulation and articulation stages, meaning they understand what they want to say but struggle to organize it into complete verbal utterances.

Previous research indicates that Broca's aphasia patients tend to produce telegraphic speech, meaning that the utterances consist only of essential words without complete grammatical elements (Hattab, 2023). Additionally, patients experience disfluency, word repetition, and difficulty retrieving specific vocabulary. These conditions can significantly impact the patient's quality of communication and social interaction in daily life (NIDCD, 2024).

In this study, the concept of speech production is utilized to analyze how Sarah Scott and Mike Caputo produce language years after their strokes. The analysis is conducted by observing speech patterns, fluency, sentence structure, the use of pauses, and the types of linguistic difficulties that appear in the analyzed videos. Using this approach, the research can demonstrate the representation of language production impairment in these two Broca's aphasia survivors.

Communication Strategies in Aphasia Patients

In addition to experiencing impairments in speech production, aphasia

patients employ various communication strategies to help convey meaning to their interlocutors. Communication strategies are verbal or non-verbal techniques used to overcome linguistic limitations during the communication process. According to Bialystok (1990), communication strategies are used to maintain interaction when an individual faces difficulties in producing language normally.

Patients with Broca's aphasia generally utilize several communication strategies, such as gestures, word repetition, self-correction, facial expressions, and assistance from the interlocutor (Bialystok, 1990). Gestures are often used to replace words that are difficult to pronounce, while self-correction occurs when the patient attempts to fix erroneous speech. In some cases, patients also rely on the help of a partner or family member to complete the intended meaning.

Previous research has shown that communication strategies play a vital role in helping aphasia patients maintain social interaction and improve communication effectiveness (Hattab, 2023). The use of specific strategies can be influenced by the severity of the aphasia, psychological conditions, the social environment, and the recovery process experienced by the patient.

In this research, communication strategy theory is used to analyze how Sarah Scott and Mike Caputo maintain communication despite their speech production impairments. This study identifies various verbal and non-verbal strategies used by both subjects in the analyzed YouTube videos. Thus, the research focuses not only on the emerging linguistic difficulties but also on the efforts made by both survivors to remain effective communicators.

METHOD

This research employs a qualitative research method with a comparative descriptive approach to analyze the speech production and communication strategies of two Broca's aphasia survivors of different genders. The data were taken from Sarah Scott's (2017) and Tactus Therapy's (2017) Youtube channels. To ensure a systematic comparative analysis, this study established predetermined comparison criteria derived from neurolinguistic theory and contemporary aphasia rehabilitation literature. First, speech production was compared based on linguistic characteristics commonly associated with Broca's aphasia, including fluency, speech pauses, agrammatism, word-finding difficulties (dysnomia), articulation, sentence completeness, and self-repair (Levelt, 1989; Fridriksson and Hillis, 2021). Second, communication strategies were examined by identifying compensatory behaviors such as gesture use, word repetition, interlocutor assistance, confirmation checks, and collaborative sentence completion, following psycholinguistic and supported communication perspectives (Bialystok, 1990; Simmons-Mackie et al., 2016). Finally, the comparison also considered broader communicative contexts, including communication independence, interaction with communication partners, social participation, and individual recovery experiences, as these dimensions are recognized as important indicators of successful aphasia rehabilitation and communicative participation (Azios et al., 2022; Manning et al., 2021). These comparison criteria reflect current recommendations for person-centered aphasia rehabilitation, which emphasize the assessment of both linguistic performance and functional communication within real-life interaction (Australian Aphasia Rehabilitation Pathway, 2024).

The qualitative approach was selected because this study focuses on the interpretation of linguistic data, communication patterns, and the representation of

speech impairments occurring within the subjects' natural communication. According to Creswell (2014), qualitative research is used to understand social phenomena and human behavior through the interpretation of descriptive data in the form of words, speech, and interactions. In this study, the researcher seeks to understand how aphasia survivors produce language and maintain communication following a stroke.

The research subjects consist of two Broca's aphasia survivors identified via the YouTube platform, Sarah Scott as the female subject and Mike Caputo as the male subject. Both subjects were selected because they both experience Broca's aphasia resulting from a stroke, and there is video documentation of their condition uploaded to YouTube in the same year. Sarah Scott's video displays her condition eight years after suffering a stroke at the age of 18, while Mike Caputo's video shows his condition seven years post-stroke. These subjects were chosen through purposive sampling as they exhibit relevant communication characteristics and experienced strokes within a similar timeframe, with only approximately a one-year difference, aligning with the research focus on speech production disorders and communication strategies in Broca's aphasia patients.

The research data consists of verbal utterances, speech pauses, word repetitions, self-corrections, the use of interlocutor assistance, and other forms of communication strategies appearing in the subjects' videos. Data were obtained from one primary video for each subject uploaded to YouTube in 2017. Additionally, supporting information regarding the subjects' communication development was gathered from video descriptions and their social media activities such as Youtube and Facebook.

The primary instrument in this study is the researcher, commonly referred to as human instrument, as the analytical process is conducted through observation, transcription, identification, and interpretation of the linguistic data present in the videos. As is common in qualitative inquiry, the researcher functioned as the primary instrument responsible for observing, transcribing, coding, and interpreting the data (Creswell, 2014; Miles et al., 2013). To assist the analytical process, the researcher utilized documentation and video transcription techniques. All significant utterances from both subjects were transcribed to facilitate the identification of speech production characteristics and the communication strategies employed.

The analysis was guided by two complementary theoretical frameworks. Speech production was interpreted using Levelt's (1989) model of speech production, focusing on conceptualization, formulation, and articulation processes. Communication strategies were analyzed based on psycholinguistic perspectives of compensatory communication and supported communication described in contemporary aphasia rehabilitation literature (Azios et al., 2022; Simmons-Mackie et al., 2016).

Data collection was carried out through several systematic stages. First, videos meeting the inclusion criteria were selected and observed repeatedly to obtain a comprehensive understanding of each participant's communication context. The researcher then transcribed all relevant utterances and documented verbal and non-verbal communicative behaviors. The collected data were subsequently organized according to the predetermined comparison framework for further analysis. The data analysis followed an inductive qualitative coding process. First, all relevant utterances produced by the participants were transcribed verbatim from the selected videos. During the initial coding stage, each utterance was assigned descriptive codes

representing observable linguistic characteristics, such as long pauses, agrammatism, dysnomia, self-repair, word repetition, gesture use, interlocutor assistance, and sentence completion. In the second stage, similar codes were grouped into broader analytical categories corresponding to speech production and communication strategies. Finally, the categorized data were compared across the two participants to identify similarities, differences, and possible influences of individual characteristics, including age, gender, recovery duration, and communicative environment.

To enhance the credibility of the findings, this study employed source triangulation. Data were not interpreted solely from the participants' utterances but were cross-checked using multiple sources available within each video, including contextual explanations provided by the interviewer, responses from communication partners such as family members, and background information presented in the video descriptions. Furthermore, the observed linguistic characteristics and communication strategies were compared with established findings reported in previous aphasia studies and contemporary rehabilitation literature. Repeated viewing of each video was also conducted throughout the analysis to verify transcription accuracy and ensure consistency in interpreting the participants' speech production and communicative behaviors.

FINDINGS AND DISCUSSION

Speech Production while Undergoing Treatment for Broca's Aphasia

This study reveals that both research subjects, Sarah Scott and Mike Caputo, demonstrate the core characteristics of Broca's aphasia: non-fluent speech, agrammatism, disfluency, and word-finding difficulties. This finding aligns with research by Hattab (2023), which states that individuals with Broca's aphasia tend to produce short, fragmented speech laden with pauses due to disruptions in language production. Furthermore, recent studies indicate that the primary obstacles for Broca's aphasia patients reside in the formulation and articulation stages of speech production rather than in language comprehension (Fridriksson and Hillis, 2021).

An analysis of Sarah Scott's video reveals that she is capable of producing relatively more stable speech compared to Mike Caputo. Nonetheless, Sarah still exhibits defining features of Broca's aphasia, such as telegraphic speech, long pauses, hesitation, and dysnomia. She frequently pauses mid-utterance to retrieve intended words and tends to rely on short, simple sentences when describing her post-stroke experiences.

Excerpt 1

"Sometimes I still can't find the words... but I keep trying to speak every day." (Sarah Scott)

This pattern indicates that lexical retrieval remains impaired but self-monitoring mechanisms are relatively preserved. This condition is allign with the findings of Fridriksson and Hillis (2021), who explain that Broca's aphasia patients frequently face lexical retrieval failures and speech production impairments due to neurological damage in the language areas of the brain's left hemisphere. However, compared to Mike Caputo, Sarah appears to possess more developed and independent communication skills. A contributing factor to this advanced state may be the intensity of her communication practice and her active involvement in the aphasia

community in London.

Furthermore, Sarah explains that she consistently forces herself to speak with strangers despite feeling fearful and insecure. She demonstrates relatively independent speech compensation despite persistent Broca's aphasia symptoms and also actively recognizes that continuous communication practice helps improve her speaking abilities. In line with this, research by Hersh et al. (2012) shows that active and sustained communication practice can enhance communicative participation and boost self-confidence among individuals with aphasia.

In contrast to Sarah Scott, Mike Caputo exhibits more severe and fragmented speech production characteristics. His speech is exceptionally slow, marked by prolonged pauses, and heavily reliant on his wife's assistance to complete sentences. While Mike clearly understands what he wishes to convey, he faces profound difficulties translating those thoughts into verbal utterances.

Excerpt 2

"I know what I want to say... but the words don't come out." (Mike Caputo)

This pattern exemplifies the classic manifestation of Broca's aphasia, where speech production is severely impaired while language comprehension remains relatively preserved. This observation is supported by Wilson and Schneck (2021), who note that patients with Broca's aphasia generally comprehend conversations well but suffer severe deficits in verbal production. Mike also heavily relies on clue words and promptings from his wife to maintain the flow of conversation, indicating that his language formulation processes remain profoundly disrupted even seven years post-stroke.

Additionally, Mike participates in the "Voices of Hope for Aphasia" program in St. Petersburg, Florida, led by Dr. Jackie Hinckley. This program involves approximately 60 members and operates over a three-day schedule. Community support and group therapies of this nature are known to help individuals with aphasia maintain their social communication skills (Simmons-Mackie et al., 2022). Nevertheless, the results of this study highlight that the trajectory of communication recovery varies uniquely across individuals, even when stemming from the same underlying cause, namely a stroke.

In summary, while both subjects manifest the hallmark traits of Broca's aphasia, which are non-fluent speech, agrammatism, and disfluency, a clear discrepancy exists in their levels of communicative fluency. Sarah Scott demonstrates a more stable and independent communicative progression, whereas Mike Caputo remains highly dependent on interlocutor support to convey meaning. This finding corroborates the work of Stefaniak et al. (2020), which asserts that language recovery in aphasia is dictated by a constellation of factors, including the extent of neurological damage, social support systems, communication exercises, and individual psychological states.

Table 1. Comparison of speech production characteristics

Aspect	Sarah Scott	Mike Caputo
Speech fluency	Relatively more fluent	Highly fragmented
Sentence structure	Short but more developed	Very simple

Dysnomia	Present	Strongly present
Pause and hesitation	Frequent	Very frequent
Communication independence	More independent	Dependent on wife's assistance
Speech style	Telegraphic speech	Non-fluent fragmented speech

An additional aspect emerging from the findings is the influence of long-term recovery experiences on speech production patterns. Although both Sarah Scott and Mike Caputo experienced Broca's aphasia following a stroke and had lived with the condition for several years, their speech outcomes differed noticeably. Sarah appeared capable of producing more complete utterances and maintaining conversational flow despite frequent pauses and lexical retrieval difficulties. In contrast, Mike's speech remained highly fragmented and effortful, indicating a greater disruption in language formulation processes. This finding supports the argument that aphasia recovery trajectories vary considerably among individuals and cannot be predicted solely based on the length of time since stroke onset (Stefaniak et al., 2020).

Recent research emphasizes that language recovery after stroke is strongly influenced by neuroplasticity, which refers to the brain's ability to reorganize neural networks and compensate for damaged language regions. Wilson and Schneck (2021) explain that post-stroke language recovery often involves the recruitment of alternative neural pathways that support communication when traditional language networks have been compromised. However, the degree of neuroplastic adaptation differs from one individual to another depending on factors such as lesion size, age, rehabilitation intensity, and opportunities for communication practice. The contrast between Sarah and Mike may therefore reflect different patterns of neural reorganization and recovery experiences rather than merely differences in gender.

Another noteworthy finding concerns the relationship between speech production and psychological adaptation. Throughout the analyzed video, Sarah repeatedly highlighted the importance of maintaining personal goals, practicing communication, and actively engaging with other people despite feelings of fear and insecurity. Her statements suggest a strong sense of motivation and self-efficacy during the recovery process. Previous studies have demonstrated that psychological factors, including confidence, resilience, and willingness to participate socially, can significantly influence communicative outcomes in individuals with aphasia (Manning et al., 2021). Therefore, Sarah's relatively more fluent communication may not only be associated with linguistic recovery but also with her active efforts to remain socially engaged.

Furthermore, the findings indicate that communication opportunities play a substantial role in shaping speech production performance. Sarah frequently participates in aphasia support groups, communicates through social media platforms, and intentionally practices speaking with unfamiliar people. Such activities provide repeated opportunities to use language in authentic contexts. Meaningful participation in everyday communication is a crucial component of successful aphasia rehabilitation because it encourages continuous language use beyond formal therapy settings (Aphasia Rehabilitation Best Practice Statements, 2024). The recommendations emphasize that individuals with aphasia should be supported in engaging with real-life communication environments whenever possible.

In contrast, Mike's communication experiences appear to rely more heavily on structured support systems, including his wife and the Voices of Hope for Aphasia

program. Although these support systems are highly beneficial, the findings suggest that his communication remains strongly dependent on external scaffolding. This observation is consistent with Communication Partner Training research, which demonstrates that trained communication partners can significantly improve interaction quality for people with aphasia by facilitating message exchange and reducing communication breakdowns (Simmons-Mackie et al., 2016). Consequently, Mike's case illustrates how successful communication may still occur despite severe speech production difficulties when appropriate support mechanisms are available.

Taken together, these findings highlight that speech production in Broca's aphasia should be understood as a dynamic interaction between neurological impairment, rehabilitation experiences, psychological adaptation, and social participation. The differences observed between Sarah Scott and Mike Caputo demonstrate that recovery is not solely determined by the presence of language impairment itself, but also by the opportunities, support systems, and communicative environments available to each individual.

Communication Strategies

Beyond exhibiting speech production deficits, both subjects employ various communication strategies to sustain interaction. According to Bialystok (1990), communication strategies are deployed to circumvent linguistic limitations when individuals experience difficulties conveying meaning verbally. This study finds that Sarah Scott and Mike Caputo employ distinct communication strategies tailored to their respective conditions and degrees of language impairment.

Sarah Scott actively utilizes strategies such as gesturing, word repetition, self-repair, and occasional written support when encountering speech blocks. She also proactively hones her communicative skills through daily social interactions, her local aphasia community, and social media platforms like Facebook and Twitter. She underscores the necessity of continuous verbal practice to foster communicative development.

These findings are also supported by Manning et al. (2021), who state that social participation and the presence of a support community play a vital role in helping aphasia survivors rebuild their self-confidence and quality of life after a stroke. Furthermore, Souchon et al. (2020) explain that social support from the surrounding environment can boost the motivation of individuals with aphasia to remain active in communicating and participating in daily social life.

Excerpt 3

"Keep trying and practicing... don't be afraid to speak." (Sarah Scott)

This behavior demonstrates Sarah's reliance on more independent and active communication strategies. Hersh et al. (2012) explain that regular social engagement and routine communication practice significantly enhance communicative confidence in aphasia patients. Furthermore, Sarah notes that connecting with fellow aphasia survivors reassures her that she is not alone, motivating her to continue practicing. Such social support networks exert a powerful influence on the communicative rehabilitation process (Hersh et al., 2012).

Conversely, Mike Caputo utilizes communication strategies that rely heavily on interlocutor support. Mike frequently relies on long pauses, word simplification,

and direct assistance from his wife to sustain a conversation. Throughout his video, his wife frequently anticipates, guesses, or fills in the words Mike struggles to articulate. This interaction exemplifies "supported communication," a framework where communication partners actively facilitate the aphasia survivor's message delivery to maintain effective social interaction (Simmons-Mackie et al., 2007).

The assistance provided by Mike's wife underscores the critical role that spousal support plays in sustaining daily communication for individuals with aphasia. As Simmons-Mackie et al. (2007) indicate, the support of spouses, family members, and the broader social environment is paramount in securing ongoing communication access and daily social participation for survivors.

Based on this analysis, the study identifies a fundamental divergence in the communication strategies adopted by the two subjects. Sarah Scott demonstrates a self-reliant and proactive communication pattern mediated by social practice and community engagement. Meanwhile, Mike Caputo remains dependent on spousal scaffolding to sustain interaction. This divergence is likely shaped by their individual recovery trajectories, the severity of their aphasia, social exposure, and the nature of their immediate environmental support.

These findings reinforce the view that aphasia recovery is not dictated solely by neurological factors, but is also heavily modulated by social support, communication practice, and an individual's daily interpersonal engagement. Consequently, peer support communities and active communication exercises represent indispensable pillars in helping Broca's aphasia survivors optimize their quality of communication.

Influence of Individual Characteristics on Communication

The findings of this study indicate that communication recovery in Broca's aphasia extends beyond neurological rehabilitation and is strongly influenced by social participation and environmental support. Although both Sarah Scott and Mike Caputo experienced similar neurological conditions after stroke, their communication outcomes appear to be considerably different. Sarah demonstrates a greater degree of communicative independence, whereas Mike relies more heavily on support from his wife and structured aphasia programs. This difference suggests that recovery is shaped not only by the severity of the language impairment but also by the opportunities available for communication practice and social engagement.

Sarah repeatedly emphasized the importance of continuing to communicate despite experiencing fear, hesitation, and word-finding difficulties. She actively sought opportunities to interact with strangers, participated in aphasia support groups, and engaged with online communities through social media platforms. These experiences appear to have contributed to her confidence and communicative development. Similar findings were reported by Manning et al. (2021), who found that social participation plays a crucial role in helping working-aged adults with aphasia maintain a meaningful life after stroke. Their participants reported that social isolation often had a greater negative impact than the language impairment itself. Consequently, opportunities to participate in social activities were associated with improved well-being, confidence, and communication outcomes.

The importance of social engagement is also supported by Manning et al. (2021), who argued that effective stroke care should extend beyond clinical rehabilitation and address the broader social experiences of individuals with aphasia. Their findings

demonstrate that long-term recovery is closely linked to participation in meaningful social relationships, community activities, and supportive communication environments. In Sarah's case, participation in aphasia communities in London appears to provide not only opportunities for language practice but also emotional support and a sense of belonging. Such experiences may explain why Sarah demonstrates more developed communication abilities despite continuing to experience language difficulties.

Recent evidence also highlights the role of social networks in aphasia recovery. Hammond et al. (2026) found that the composition and quality of an individual's social network significantly influence communication recovery in chronic post-stroke aphasia. Individuals who maintained broader and more active social networks tended to demonstrate better communication participation and adaptation. This perspective aligns with Sarah's experiences, as she consistently emphasized the value of interacting with other aphasia survivors and maintaining communication activities in daily life.

In contrast, Mike Caputo's communication is characterized by extensive support from his wife. Throughout the analyzed video, his wife frequently assists him by providing a hint of the words, completing sentences, and facilitating conversational flow. Although this indicates a higher level of dependency, such support should not be interpreted negatively. Instead, it reflects the importance of communication partner involvement in facilitating successful interactions for individuals with aphasia. Simmons-Mackie et al. (2016) explain that communication partner training enables family members and caregivers to develop effective strategies for supporting communication while preserving the autonomy and dignity of individuals with aphasia. Their systematic review concluded that communication partner interventions improve participation, conversational success, and communicative confidence.

The interaction observed between Mike and his wife can be interpreted from the perspective of communicative participation. Eadie et al. (2006) define communicative participation as an individual's involvement in life situations where the exchange of knowledge, information, ideas, or feelings occurs. Although Mike experiences severe difficulties in speech production, the assistance provided by his wife enables him to remain actively involved in conversation and social interaction. Through her support, Mike is able to express his intended messages despite frequent pauses and word-finding difficulties. This finding suggests that successful communication in aphasia should not be evaluated solely based on linguistic accuracy but also on the individual's ability to participate meaningfully in everyday communicative situations. The conversational interaction between Mike and his wife therefore demonstrates how communicative participation can be maintained despite significant language impairments.

Another important finding concerns the role of conversation as a central component of aphasia rehabilitation. Traditional aphasia treatment has often emphasized linguistic accuracy and language-specific exercises; however, contemporary rehabilitation approaches increasingly recognize conversation as an important outcome of intervention because communication primarily occurs within social interactions. Azios et al. (2022), in their systematic scoping review of 64 aphasia studies, highlighted the growing interest in measuring conversation as an outcome of aphasia treatment. Their review identified numerous approaches and tools used to evaluate conversational performance, reflecting the recognition that successful rehabilitation should extend beyond isolated language tasks and consider an individual's ability to engage in meaningful interaction. This perspective is relevant to the present study, as both Sarah

Scott and Mike Caputo demonstrate that everyday conversation serves as a primary context in which communication abilities are maintained, practiced, and expressed following stroke. Therefore, the analysis of natural conversational data from social media provides valuable insight into how individuals with Broca's aphasia manage communication in real-life situations.

This perspective is particularly relevant to Sarah's recovery experiences. Rather than relying solely on formal therapy, Sarah repeatedly highlighted the value of everyday conversations and real-world communication opportunities. Her belief that speaking with strangers improved her communication skills aligns with contemporary aphasia rehabilitation principles emphasizing participation-focused intervention. Similarly, rehabilitation should prioritize meaningful communication, social participation, and person-centered goals rather than focusing exclusively on language impairment (Aphasia Rehabilitation Best Practice Statements, 2024).

The findings of this study also resonate with evidence regarding group-based aphasia intervention. Hoover et al. (2025) reported that conversation group treatment provides significant benefits for individuals with chronic aphasia by improving language use, communication effectiveness, and social participation. Group settings allow participants to practice communication in naturalistic contexts while receiving support from peers who share similar experiences. Sarah's positive experiences within aphasia support groups reflect these findings, suggesting that peer interaction may contribute substantially to communicative adaptation and psychological resilience.

Overall, the comparison between Sarah Scott and Mike Caputo demonstrates that Broca's aphasia is not manifested uniformly across individuals. Although both participants experienced similar neurological conditions following stroke and exhibited the hallmark characteristics of Broca's aphasia, namely non-fluent speech, disfluency, and word-finding difficulties, their communicative outcomes differed considerably. Sarah's speech was relatively more stable and self-directed, whereas Mike's communication remained heavily reliant on external support. These differences suggest that aphasia recovery extends beyond neurological impairment and is influenced by a range of personal and environmental factors.

The findings also indicate that communication competence in aphasia should not be evaluated solely through linguistic accuracy or speech fluency. Rather, successful communication involves the ability to negotiate meaning, maintain interaction, and participate in everyday social contexts. In this regard, both subjects demonstrated adaptive ways of coping with their communication difficulties despite persistent language limitations. Therefore, the present study supports contemporary aphasia rehabilitation perspectives that emphasize functional communication, social participation, and person-centered approaches as essential components of long-term recovery (Azios et al., 2022; Australian Aphasia Rehabilitation Pathway, 2024).

CONCLUSION

This study demonstrates that, as survivors of Broca's aphasia, both Sarah Scott and Mike Caputo manifest the core diagnostic characteristics of the condition, including non-fluent speech, disfluency, telegraphic speech, protracted pauses, and word-finding difficulties or dysnomia. These findings corroborate established neurolinguistic frameworks asserting that damage to Broca's area selectively impairs language production, specifically targeting the formulation and articulation stages of speech. However, despite sharing a stroke-induced etiology, the two

subjects display distinct variations in their communication fluency and the coping strategies they deploy.

Sarah Scott demonstrates a relatively more stable and independent communicative capacity. She autonomously leverages a suite of communication strategies, including gestures, repetitions, and self-repairs, while aggressively seeking out real-world practice through social networks and specialized aphasia communities. Conversely, Mike Caputo's speech is noticeably more fragmented, requiring extensive spousal scaffolding to maintain conversational flow. This dichotomy highlights that communicative rehabilitation in Broca's aphasia is a variable process governed by interconnected factors such as social support systems, conversational environments, targeted speech practice, and individual life histories.

Furthermore, this research underscores that social media platforms like YouTube can serve as highly valuable sources of authentic data for neurolinguistic and psycholinguistic inquiries. Video documentation of aphasia survivors allows researchers to observe the naturalistic representation of language deficits and communication strategies far beyond the artificial constraints of clinical environments. Consequently, this study contributes to the expanding literature on neurolinguistics by demonstrating how digital media can capture the lived reality of speech production and communicative adaptation in Broca's aphasia survivors.

Nevertheless, several limitations must be acknowledged. Because this study relies on only two videos as primary data sources, the findings cannot be broadly generalized to the entire Broca's aphasia population. Additionally, specific clinical data regarding the exact extent of neurological damage, medical history, or standardized aphasia severity scores were inaccessible. Given that every stroke survivor possesses a distinct neuroanatomy, recovery rate, and personal background, the communicative differences observed here cannot be attributed solely to gender.

Building upon these limitations, future research would benefit from expanding data parameters to include larger participant cohorts. Combining open-source social media data with formal interviews or clinical assessments would yield deeper, more comprehensive insights. Finally, the role of digital media and virtual peer networks in facilitating aphasia recovery remains a fertile area for future investigation within the fields of linguistics and speech-language rehabilitation.

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