

I would tell you if I could: Language loss, depression, and the challenge of treating patients with aphasia

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Abstract

People with aphasia are prone to depression as a result of communication challenges associated with their language disorder. These same communication challenges greatly limit their ability to benefit from psychotherapy, one of the most recommended therapies for mental illnesses like depression. This commentary describes the unique cognitive interaction between aphasia and depression, and offers some evidence-based communication strategies, such as Supported Conversation for Adults (SCA) with Aphasia, that can help facilitate the therapeutic process for people with aphasia who are also experiencing depression.

Psychotherapy is one of the most efficacious treatments for depression and is based on the core idea that talking through problems can help change negative thoughts or change perspectives.^{1,2} But what if your ability to talk is impaired? Aphasia, a language disorder caused by damage to the brain, affects approximately 30% of people following a stroke event.^{3,5} Having aphasia is known to significantly increase the risk of depression.⁶⁻⁸ Unfortunately, people with aphasia are uniquely disadvantaged in their ability to access therapy for mental illness, due to their language impairment. The very thing that could help to alleviate the strain of mental illness—the ability to communicate—is the very thing that is impaired. Communication is both the casualty and the remedy.

There are approximately 100,000 Canadians living with aphasia, nearly twice as many as with Parkinson's Disease.^{3, 4, 9} While most Canadians have likely heard of Parkinson's, aphasia is not nearly as well known. This might be attributed to the wide variability of aphasia subtypes and etiologies. No two brains are the same; no two strokes.

Aphasia can disrupt any aspect of language processing including: speaking, comprehension, reading, or writing. The type of aphasia depends upon the location and severity of the brain injury. While other aspects of cognition might also be affected by the brain injury, aphasia—in and of itself—does not affect one's intelligence.⁵ Aphasia is classified into two main categories: expressive and receptive. In expressive (non-fluent) aphasia, a person knows what they want to say, but struggles to produce spoken or written language, with a spectrum ranging from mild word-finding difficulty, to disjointed speech, to the inability to say any words at all. In receptive (fluent) aphasia, a person can still speak smoothly, but their language content may have little or no meaning and include an array of misplaced or nonsensical words. People with receptive aphasia are often unaware of their impairment, because their auditory comprehension is typically the most affected language domain.

What, then, unifies these two categories of aphasia? There are several areas in the left (or dominant) cerebral hemisphere, surrounding the lateral sulcus, that play a critical role in speech and language, including: Broca's area, Wernicke's area, the angular gyrus, and the auditory cortex. Language processing, however, is a dynamic

system that is distributed throughout the entire brain.^{10,11} Language relies on all aspects of cognition including: memory, attention, encoding, activation, inhibition, and timing mechanisms.^{11,12} It is valuable, therefore, to consider the complex interplay between cognitive processing and mental health. Aphasia and depression are both brain-based disorders that place demands on the same system: a single neural network with finite capacity. While the brain is plastic and remarkable in its ability to rewire and compensate after injury, all resources have limits.¹³

At least 30% of stroke survivors suffer from depression.^{8,14,15} Prevalence is much higher, up to 70% three-months post-stroke, when complicated with aphasia.⁶ While the prevalence tends to decrease over time (rates reduce to 62% at 12-months post-stroke), rates of major depression reportedly rise from 11% to 33% in a 12-month period.³ The type of aphasia also seems to be a factor, with expressive aphasia being the strongest predictor of depression.⁴

It would be an oversimplification to say that aphasia causes depression. However, given the powerful relationship between communication and identity, it comes as little surprise that aphasia might open a door to depression.^{16,17} Symptoms of depression include persistent sadness, dependence, indecision regarding physical and cognitive difficulties, and—in extreme cases—suicidal thoughts.¹⁹ Aphasia, like depression, is largely an invisible impairment. We cannot see damage to the left inferior frontal gyrus (causing expressive aphasia) the way we can see a broken leg. When one meets a person in a wheelchair, one might think to hold the door open for them, but what about a person with aphasia? A language disorder is more difficult to identify, let alone accommodate for, especially when the general population knows little about it. People with aphasia are routinely confronted by impatient listeners, confused looks, and communication breakdowns. Social isolation can be a long-term result of aphasia, further diminishing mental health.^{20,21} Not only is day-to-day communication a challenge, so is accessing the medical system. Imagine a person in a wheelchair who needs to see a psychiatrist, but cannot enter the building due to the lack of ramps and elevators. An equivalent accessibility issue exists for people with aphasia. Not only is there reduced access to healthcare for people with communication disorders, but also lower satisfaction with the healthcare system and higher rates of medical errors.²²

With respect to treatment of depression in people with aphasia, careful assessment is the first step, but many standard assessments

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for depression are inadequate because they rely on the client's language ability to confirm signs and symptoms. Fortunately, tools have been developed to bridge this gap. The Stroke Aphasia Depression Questionnaire and the Aphasic Depression Rating Scale rely primarily on caregiver report and the Depression Intensity Scale Circles is a simple, graphic scale designed for individuals with communicative deficits following brain injury.²³⁻²⁵ These tools all demonstrate good validity and reliability as screens for depression in people with aphasia.^{18, 23-25} Behavioural therapy is shown to benefit people with aphasia.²⁶ Speech-language pathologists are in a unique position to educate other healthcare professionals about effective, aphasia-friendly communication techniques.²² Research demonstrates that training communication partners in conversation strategies can help minimize the disability of aphasia.²⁷ Implementing this training and raising awareness about its importance can dramatically increase communication opportunities for people with aphasia.

One specific conversation strategy, Supported Conversation for Adults with Aphasia (SCA), is based on the concept that people with aphasia "know more than they can say."^{28, 29} SCA trains communication partners to facilitate conversation by writing down key words, using gestures, drawing pictures, verifying the message has been understood, and acknowledging the competence of the person with aphasia. As of 2015, Canadian Stroke Best Practices now specifically recommend using SCA when providing healthcare to with people with aphasia.³⁰

More generally, supported conversation aims to reduce barriers and enhance interaction. To do this, a clinician working with a person with aphasia can make some specific accommodations such as speaking in clear, short sentences at a relaxed pace, and allowing the patient extra time for language processing.²² If the patient is struggling to get their message out, ask yes or no questions to clarify. Always check that you have understood them and they have understood you. Be flexible with communication modalities, incorporating writing, drawing, and gesture. Minimize environmental distractions, such as unnecessary noise, and ensure the patient can see your face. Consent forms and other important written documents should be made available in simplified language and graphics. Lastly, remember to speak to the patient in an appropriate and respectful tone. Their language has been impaired, not their intelligence.

Aphasia need not be a barrier to psychotherapy. Given the high incidences of depression amongst this vulnerable population, we should strive to meet this need, offer evidence-based care, and employ recommended communication strategies. The more that health care professionals learn about aphasia and how best to support communication, the more effectively depression can be identified and treated.

References

1. What is depression? [Online]. Arlington: American Psychiatric Association; 2016 [cited 2016 March 20]. Available from: <http://psychiatry.org/patients-families/depression/what-is-depression>
2. Depression and bipolar disorder [Online]. Ottawa: Canadian Mental Health Association; 2016 [cited 2016 March 20]. Available from: https://www.cmha.ca/mental_health/facts-about-depression-and-bipolar-disorder/
3. Dickey L, Kagan A, Lindsay MP, Fang J, Rowland A, Black S. Incidence and profile of inpatient stroke-induced aphasia in Ontario, Canada. *Arch Phys Med Rehabil*. 2010; 91:196-202.
4. What is aphasia? [Online]. Toronto: Aphasia Institute; 2016 [cited 2016, March 20]. Available from: <http://www.aphasia.ca/home-page/about-aphasia/what-is-aphasia/>
5. Aphasia fact sheet [Online]. Scarsdale: National Aphasia Association; 2016 [cited 2016, March 20]. Available from: <http://www.aphasia.org/aphasia-resources/aphasia-factsheet/>
6. Kauhanen M, Korpelainen J, Hiltunen P, Maatta R, Mononen H, Brusin E, et al. Aphasia, depression, and non-verbal cognitive impairment in ischaemic stroke. *Cerebrovasc Dis*. 2000; 10:455-61.
7. Robinson RG, Benson DF. Depression in aphasic patients: Frequency, severity, and clinical-pathological correlations. *BrainLang*. 1981; 14:282-91.
8. Shehata G, El Mistikawi T, Risha A, Hassan H. The effect of aphasia upon personality traits, depression and anxiety among stroke patients. *J Affect Disord*. 2015; 172:312-14.
9. Wong S, Gilmour H, Ramage-Morin P. Parkinson's disease: Prevalence, diagnosis and impact. *Health Reports*. 2014; 25:10-14.
10. Gick B, Wilson I, Derrick D. *Articulatory Phonetics*. Malden, MA;Chichester, West Sussex: Wiley-Blackwell; 2013. p. 34-35.
11. Ross ED. Cerebral localization of functions and the neurology of language: fact versus fiction or is it something else? *Neuroscientist*. 2010;16:222-243.
12. Ingram JCL. *Neurolinguistics: An Introduction to Spoken Language Processing and its Disorders*. Cambridge; New York: Cambridge University Press; 2007.
13. Raymer AM, Beeson P, Holland A, Kendall D, Maher LM, Martin N, et al. Translational Research in Aphasia: From Neuroscience to Neurorehabilitation. *J Speech Hear Res*. 2008; 51:S259-S275.
14. Depression [Online]. Centennial: National Stroke Association; 2016 [cited 2016, March 20]. Available from: <http://www.stroke.org/we-can-help/survivors/stroke-recovery/post-stroke-conditions/emotional/depression>
15. Hackett ML, Pickles K. Part I: frequency of depression after stroke: an updated systematic review and meta-analysis of observational studies. *Int J Stroke*. 2014; 9:1017-1025.
16. Cruice M, Worrall L, Hickson L, Murison R. Finding a focus for quality of life with aphasia: Social and emotional health, and psychological well-being. *Aphasiology*. 2003; 17:333-353.
17. Shadden B. Aphasia as identity theft: Theory and practice. *Aphasiology*. 2005; 19:211-223.
18. Patterson JP, Chapey R. Assessment of Language Disorders in Adults. In: Chapey R. *Language Intervention Strategies in Aphasia and Related Neurogenic Communication Disorders*. 5th ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2008. p 94-95.
19. Lubinski R. Environmental Approaches to Adult Aphasia. In: Chapey R. *Language Intervention Strategies in Aphasia and Related Neurogenic Communication Disorders*. 5th ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2008. p. 327-333.
20. Kagan A, Winckel J, Black S, Duchan JF, Simmons-Mackie N, Square P. A set of observational measures for rating support and participation in conversation between adults with aphasia and their conversation partners. *Top stroke Rehabil*. 2004;11:67-83.
21. Parr S. Living with severe aphasia: Tracking social exclusion. *Aphasiology*. 2007; 21:98-123.
22. Burns MI, Baylor CR, Morris MA, McNalley TE, Yorkston KM. Training healthcare providers in patient-provider communication: What speech-language pathology and medical education can learn from one another. *Aphasiology*. 2012; 26:673.
23. Sutcliffe LM, Lincoln NB. The assessment of depression in aphasic stroke patients: the development of the Stroke Aphasic Depression Questionnaire. *Clin Rehabil*. 1998; 12:506-513.
24. Benaim C, Cailly B, Perennou D, Pelissier J. Validation of the Aphasic Depression Rating Scale. *Stroke*. 2004; 35:1692-1696.
25. Turner-Stokes L, Kalmus M, Hirani D, Clegg F. The Depression Intensity Scale Circles (DISCs): a first evaluation of a simple assessment tool for depression in the context of brain injury. *J Neurol, Neurosurg Ps*. 2005; 76:1273-1278.
26. Thomas SA, Walker MF, Macniven JA, Haworth H, Lincoln NB. Communication and Low Mood (CALM): a randomized controlled trial of behavioural therapy for stroke patients with aphasia. *Clin Rehabil*. 2013; 27:398-408.
27. Simmons-Mackie N, Raymer A, Armstrong E, Holland A, Cherney LR. Communication Partner Training in Aphasia: A Systematic Review. *Arch Phys Med Rehabil*. 2010; 91:1814-1837.
28. Kagan A. Supported conversation for adults with aphasia: methods and resources for training conversation partners. *Aphasiology*. 1998; 12:816-830.
29. Communication tools: Communicative access & SCA™ [Online]. Toronto: Aphasia Institute; 2016 [cited 2016, March 20]. Available from: <http://www.aphasia.ca/communicative-access-sca/>
30. Hebert D, Lindsay MP, McIntyre A, et al. Canadian stroke best practice recommendations: Stroke rehabilitation practice guidelines, update 2015. *Int J Stroke*. 2016; 11:459.