



When Words Fail: Providing Effective Psychological Treatment for Depression in Persons with Aphasia

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Abstract

More than 2 million people in the United States are living with some form of aphasia, a communication disorder that has been associated with high incidence of clinical depression. Despite their large numbers, persons with aphasia have received little clinical attention from psychologists and other mental health providers. The life participation interventions and supported communication methods developed and routinely employed by speech–language pathologists could assist mental health professionals in addressing the needs of this underserved population. This paper examines the psychological challenges facing individuals living with aphasia and the factors contributing to depressive symptoms among those with significant communication loss. In addition, it explores the potential compatibility between life participation interventions developed by speech–language pathologists and evidence-based cognitive–behavioral interventions for depression, such as behavioral activation. Specific adaptations to behavioral activation for individuals experiencing aphasia-related depressive symptoms are explored, along with strategies for integrating supported communication in the provision of mental health treatment.

Keywords Aphasia · Depression · Behavioral activation · Life participation · Supported communication

Currently, more than 2.5 million people in the United States live with a language/communication disorder called aphasia, a common sequel to stroke or brain injury (Simmons-Mackie, 2018). It is estimated that approximately two-thirds of persons with aphasia suffer from clinical depression (Cruice, Worrall, & Hickson, 2010), and it is widely believed that the severity of communication difficulties in persons with aphasia may be associated with emotional distress (Thomas & Lincoln, 2008). There are no standardized direct psychological measures of depression appropriate for this population due primarily to the communication deficits characteristic of the disorder (Cobley, Thomas, Lincoln, & Walker 2012; Sutcliffe & Lincoln, 1998; Townend, Tinson, Kwan, & Sharpe, 2010).

Less than one percent of the aphasic population receives any direct treatment for psychological distress (Townend et al., 2010). Mental health professionals report having

received little education on the nature of aphasia and no training at all in how to communicate with persons with aphasia (Barnes, 2016). Psychotherapists polled reported no experience whatsoever working directly with persons with aphasia (King, 2013). Thomas, Walker, MacNiven, Haworth, and Lincoln (2013) reported that the few “psychological interventions (for stroke survivors) are ‘talk based’ and are not accessible for patients with aphasia” (p. 399). Currently, Americans with aphasia receive speech–language therapy in the first 3 months or so after onset, but due to lack of insurance funding, most fade into the community during the chronic stage (i.e., after 1 year) when they are most able to benefit from professional intervention (Wallace, 2010). The loss of independence, productivity, and overall health brought on by this situation is extremely costly to individuals, families, and society at large (NJ Aphasia Study Commission, 2015).

In recent years, a movement reaching out to this silent population has emerged across the country joining speech–language pathologists, persons with chronic aphasia, and their families in an effort to bring them back into communication with their communities using evidence-based social–behavioral techniques. The movement is called “Life Participation for Adults with Aphasia” (LPAA; Kagan,

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Black, Duchan, Simmons-Mackie, & Square, 2001). LPAA has proven highly successful in providing “access” to community for persons with aphasia. LPAA’s philosophy and communication techniques could provide a foundation for psychological treatment for aphasic persons with clinical depression.

The effectiveness of behavioral approaches to the treatment of depression, especially behavioral activation, is well documented (see Ekers et al., 2014). The similarity between this behavioral approach to depressive symptoms, which emphasizes ongoing engagement in life activities, and LPAA model of aphasia treatment suggests that the joint employment of these interventions could potentially meet the mental health needs of individuals with aphasia. In an effort to begin exploration of this interprofessional approach to addressing depression in persons with aphasia, this paper seeks to:

1. Examine the disorder of aphasia and the psychological needs and characteristics of persons living with chronic aphasia.
2. Determine the factors that have interfered with the provision of psychological services to persons with chronic aphasia (experience with language-based models).
3. Instruct psychologists and other mental health professionals in current best practice in communicating with individual persons with aphasia (supported conversation models).
4. Familiarize psychologists and other mental health professionals with the LPAA model.
5. Recommend appropriate and effective behavioral approaches to providing psychotherapeutic treatment for depressive symptoms in persons with aphasia in community mental health settings.

Aphasia and Its Effects

Aphasia is an acquired language disorder caused by localized damage typically to the left hemisphere of the brain as a result of a cerebrovascular accident (stroke), traumatic brain injury, tumor, or other neurological conditions. Stroke is the fifth leading killer of Americans today (CDC, 2017). According to the National Institutes of Health (NIH, 2018) and other sources (e.g., Northcott, Simpson, Moss, Ahmed, & Hilari, 2018), aphasia is common in the aftermath of stroke with estimates of the percentage of persons who survive a stroke and are left with aphasia varying from 24 to 50% with a median estimate of 34%. Aphasia can also result from traumatic brain injury, tumors, or infections. The National Aphasia Association (NAA, 2016) estimates that there are more people in the US living with aphasia than with Parkinson’s, multiple sclerosis (MS), and amyotrophic

lateral sclerosis (ALS) combined. While many younger people are afflicted with aphasia, most persons with aphasia are over 50. At whatever age, the loss of the ability to communicate is devastating and life-changing.

All persons with aphasia have deficits in language, such as speaking and/or auditory comprehension, writing, and reading. Because the exact site and extent of the lesion in the brain varies, as does the idiosyncratic neural organization and linguistic abilities of each individual brain, no two cases of aphasia are alike. Typically, persons with brain damage in the lower frontal lobe near the middle cerebral artery tend to have more difficulty speaking than understanding, and their aphasia is typically labeled “expressive aphasia” or Broca’s aphasia. Persons with damage more posterior in the left hemisphere tend to have more difficulty understanding speech and language than speaking, and these problems are labeled receptive or Wernicke’s aphasia. Persons with expressive aphasia frequently struggle with other disabilities like right hemiplegia. Although most persons with aphasia do not experience intellectual/cognitive losses, their speech and language deficits are often exacerbated by visual field cuts, slowed mental processing, word finding problems, distractibility, and pseudobulbar affect. Cases of aphasia can vary from mildly disabling to severely handicapping with varying duration and severity. No matter how mild or severe one’s case of aphasia, it always makes communication difficult; it is always psychologically devastating; it is always life-altering.

Some persons awaken from stroke or head injury with severe aphasia but make remarkable recovery of speech and language in the first 3 months post-onset (spontaneous recovery). Unfortunately, this type of recovery is rare, and resources diminish as time passes following the stroke or injury. In the United States, health insurance generally covers the costs of rehabilitation and support services (speech–language therapy, physical therapy, occupational therapy, medication) for the first 2 or 3 months after onset (acute stage), but more than half of survivors live for many years beyond onset (chronic stage), and more than a third of survivors live with aphasia for a normal lifespan (van der Gaag & Brooks, 2008).

Adults with aphasia and their relatives report many negative consequences of aphasia. These changes stem from and extend beyond difficulties in communication—changes in interpersonal relationships, difficulty controlling emotions, physical dependency, loss of autonomy, restricted activities, fewer social contacts, loneliness, changed social life, stigmatization, and negative feelings of irritation, stress, annoyance, and anxiety (Le Dorze & Brossard, 1995). Persons with aphasia have lost their employment, their roles in their families and in their communities, their ability to enjoy leisure activities, and their self-esteem. Their resulting mental/emotional status has been referred to in the research

literature as “post-stroke depression (PSD),” “situational depression” (Lyon, Cariski, Keisler, Rosenbek, Levine, Kumpula, Blanc 1997), “mood disorder” (Code, Hemsley, & Herrmann, 1999), and “low mood” (Thomas et al., 2013). The reported prevalence of depressive symptoms is higher in aphasic stroke patients than in stroke patients without aphasia, with estimates of 62–70% (Cruice et al., 2010; Kauhane et al., 2000). Although there has been some effort to treat depression in persons with aphasia using antidepressant medications (El Husseini et al., 2012; Laska, Von Arbin, Kahan, Hellblom, & Murray, 2005), results have been equivocal. Cognitive-behavioral interventions, however, have shown promise (see Thomas et al., 2013), and modified applications of these therapies could be considered for individuals with aphasia whenever depressive symptoms emerge (see Kneebone, 2016).

Although people with aphasia are better able to adapt and learn in the chronic stage, few services and supports are available to them when they return to their communities. A survey conducted by the New Jersey Aphasia Study Commission (2015) revealed no more than about 500 (of an estimated total of 72,000 persons with aphasia in that state) were participating in ongoing aphasia or mental health programs in any setting—aphasia centers, university centers, hospital outpatient facilities, community mental health centers, programs for seniors, and so on. In other countries, without the limitations posed by commercial health insurance in the United States, problems remain in recognizing and treating depressive symptoms in individuals with chronic aphasia. Northcott et al., (2018), for example, note that surveyed mental health providers in the United Kingdom did not consider individuals with aphasia appropriate candidates for psychotherapy. Speech-language pathologists (SLPs) have often considered it part of their role to address the psychological suffering of individuals with aphasia, while mental health professionals, despite their training in treatment of depression, have reported little confidence in working with this population (Northcott, Simpson, Moss, Ahmed, & Hilari, 2017).

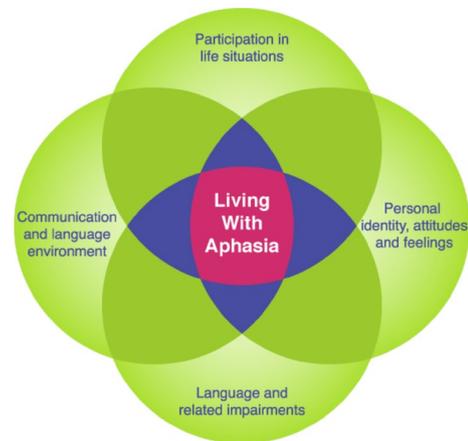
Working with Persons with Aphasia

Over the last 20 years or so, SLPs who specialize in working with persons with aphasia have increasingly espoused two related and interdependent approaches to aphasia rehabilitation—supported communication and life participation—based on the World Health Organization International Classification of Functioning, Disability, and Health (2001). These approaches contrast sharply with the one-on-one skill-based, disability-oriented treatments historically employed by speech-language therapists. While traditional evidence-based, restorative drill therapies are still a part of

every SLP’s treatment regimen, they are now seen as one part of a much larger picture.

Communication support is defined broadly as anything that improves access to or participation in communication, events, or activities. Support includes strategies, materials, or resources that are used by the person with aphasia or by others who communicate with people with aphasia “to increase their success in communicating” (King, 2013, p. 9). Communication supports for persons with aphasia might be considered analogous to the use of ramps for persons who navigate in wheelchairs.

Life participation refers to involvement in personally relevant life situations (WHO ICF, 2001). Aphasia can present barriers to participation that can be eliminated with communication supports. Advocates assert that participation speeds recovery because it fosters “motivation, competency, and self-efficacy” (Baum, 2011, p. 170).



In 2008, Kagan et al. proposed a four-factor framework, known as the aphasia framework for outcome measurement (A-FROM), for “capturing real-life outcomes of aphasia interventions” (p. 269). In this framework, the treatment of communication and language is part of only one domain to be considered when evaluating the life status of a person with aphasia. That domain also includes the “environment,” which considers both positive and negative effects that environment might have on communication abilities of persons with aphasia—from the amount of noise present during communication efforts to the degree of complexity of the print in patient information packets. The domain of “participation” is defined as a person’s involvement in personally relevant life situations (e.g., managing one’s household, relationships, leisure activities; dealing with one’s role as a parent, employee, citizen, etc.). The “personal identity, attitudes, and feelings” domain in this aphasia framework includes not only age, gender, and ethnicity, but more importantly, psychosocial factors, such as “identity, confidence and self-esteem” (p. 265).

Using this LPAA model, speech–language pathologists consider the real-life possibilities and outcomes of their clinical interventions. They are encouraged to consider all factors influencing each client’s ability to communicate. Therapeutic interventions are only deemed successful if they contribute to the client’s ability to communicate successfully in his/her environment.

One treatment approach designed to achieve these ends is contained in a set of interaction principles designed at the Aphasia Center in Toronto, Ontario, aptly named “supported conversation” (Kagan, 1998). Supported conversation is a training program directed to the communication partners of persons with aphasia. It teaches the non-aphasic communication partner techniques that help the aphasic partner communicate more successfully. Partners learn to write down the main topics of conversation while talking with a person with aphasia and develop the capacity to wait longer for a person with aphasia to process and respond. Moreover, they can offer prompts contained in a loose-leaf binder (e.g., calendars, maps, numbers); encourage the person to write, draw, or gesture; and respond more attentively to the aphasic person’s communicative attempts.

A second major change in the focus of treatment prompted by the LPAA model has been the widespread use of group interventions (Elman & Hoover, 2013). Groups not only provide built-in incentives for communication practice but also serve as vehicles for supporting all of the other domains in the A-FROM model.

Understanding Depression in Aphasia

Although there have been several contributions to the scientific literature concerning the prevalence and detection of depression among individuals with aphasia (Aström, Adolfsson, & Asplund, 1993; Hilari et al., 2010; Townend, Brady, & McLaughlan, 2007; Townend et al., 2010), much remains unclear about the etiology of depressed mood in this population. Psychologists historically have relied on three broad theoretical frameworks in their efforts to explain the development and maintenance of depressive symptoms: (a) behavioral theories, (b) cognitive approaches, and (c) biomedical conceptualizations (Ritschel, Gillespie, Arnarson, & Craighead, 2013). Each of these approaches has relevance when conceptualizing depressive symptoms experienced by persons with aphasia, yet each also requires careful evaluation and adaptation for the unique life situations these individuals face.

Behavioral theories of depression, such as that first advanced by Lewinsohn (1974), attribute the development of depressive symptoms to reductions in response-contingent positive reinforcement. Lost opportunities for positive reinforcement may contribute to social withdrawal, decreased

interest in activities previously enjoyed, reduced estimations of life satisfaction and self-esteem, hopelessness, fatigue, and potentially suicidal thoughts and behaviors as escape from a worsening life situation. There can be little doubt that for persons with aphasia, opportunities for reinforcement through social communication—and in many other areas of human endeavor—have undergone a profound change. The obstacles to interpersonal verbal interaction that aphasia presents are likely contributors to reduced loss of life engagement and development of depressed mood. Relational disruptions, loss of work or vocation, co-occurring physical disabilities, as well as other losses common to persons with aphasia (e.g., financial changes, reduced autonomy) all are common for individuals with aphasia (Cruice, Worrall, & Hickson, 2006; Davidson, Howe, Worrall, Hickson, & Togher, 2008; Vickers, 2010). In social learning terms, individuals with aphasia experience a significant decrease in self-efficacy (Robinson-Smith, Johnston, & Allen, 2000).

Lewinsohn (1974) also highlighted the importance of interpersonal skills when responding to contextual changes, noting that social deficits made overcoming life adversity that much more challenging. Individuals with aphasia are at a decided disadvantage in this regard, given that they often must develop entirely new repertoires for navigating interpersonal communication. Those who have previously identified closely with their work, particularly individuals whose work involved complex language skills (e.g., salespersons, writers, attorneys), may suffer when attempting to adapt to a life without full access to their verbal abilities. In addition, these individuals may experience feelings of vulnerability and even shame when, deprived of their verbal communication skills, they can no longer command the attention and compliance of others in their lives (Nyström, 2006). The task of resuming engaging life activity and discovering new contingencies of positive reinforcement can be daunting.

Cognitive–behavioral theories of depression (e.g., Beck, 1987; Ellis, 1999) may also help with understanding mood-related distress among persons with aphasia. These theories recognize the importance of reinforcement contingencies but emphasize the role that thoughts or beliefs play in shaping those contingencies. Seligman (1975) developed the theory of “learned helplessness” to explain how individuals with depression come to believe that their efforts are ineffectual and that attempts to change one’s circumstances seem futile. Drawing on research involving animal models, Seligman noted that individuals subjected to situations they can neither change nor control may curtail nearly all activity, relinquishing efforts to alter their circumstances. Building on Seligman’s work, Abramson, Metalsky, and Alloy (1989) hypothesized that “hopelessness depression” stems directly from an individual’s belief that his or her deficits are so pervasive and debilitating that they preclude the possibility of achieving desired outcomes. Given the pervasive effects

aphasia can have on an individual's relational life and social world, as well as the numerous obstacles persons with aphasia encounter when attempting to engage in activities that were once routine, the experience of helplessness is almost unavoidable and feelings of hopelessness often ensue. The resulting loss of a sense of self-efficacy or personal control, which has been closely tied to the constructs of helplessness and hopelessness, can render depression persistent and profound (Maddux & Meier, 1995).

Proponents of cognitive-behavioral interventions for depression, such as Ellis (1958), have noted that individuals experiencing psychological distress often perceive life information in inaccurate or ineffective ways, leading to passivity, feelings of helplessness, and hopelessness about the future. Ellis dubbed these ineffective interpretations "irrational beliefs," while Beck (1987) described them as "cognitive distortions." For Ellis (1999), the primary irrational belief was "demandingness"—an insistence that one's experience should be otherwise than it is. Numerous secondary irrational beliefs followed, Ellis argued, from this primary demandingness, including "awfulizing," "musting," and "shoulding." Beck and other cognitive-behavioral therapists identified frequently occurring cognitive distortions that may contribute to the maintenance of depressive symptoms (Beck, Rush, Shaw, and Emery, 1979; Hofmann, 2012). Examples of these unhelpful thinking styles include all-or-nothing thinking (i.e., viewing situations with little nuance or flexibility), personalization (i.e., construing unwanted experience as an affront or evidence of one's own failings), and emotional reasoning (i.e., judging the truth value of statement by how one feels when making it—"If I feel lousy, then things are lousy.").

These cognitive theories of depression may help mental health professionals understand several aspects of depressive symptoms experienced by persons with aphasia. For example, the stark terms in which all-or-nothing and "awfulizing" cognitions cast life situations may make these ways of thinking hard to ignore. It is not uncommon for individuals with aphasia to judge their current experience, considering it awful or simply too painful to acknowledge. Persons with aphasia may shy away from formal social contacts because they do not want others, including family members, to see the changes they have undergone or the communication difficulties they are facing (Cruice et al., 2006; Davidson et al., 2008; Vickers, 2010). Some individuals may no longer come to the telephone or even allow their pictures to be taken because they do not wish anyone, including themselves and their family members, to encounter their post-stroke reality.

This type of depressogenic thinking makes clear the urgency and severity of the distress that persons with aphasia can face. When guided by these thoughts, clients may have difficulty seeing any benefits of their rehabilitation efforts, as they attend only to their widespread losses and minimize

gains made in treatment. For individuals focused on loss and deficits, the daily challenges faced in recovery and efforts to discover alternative life activities may come to serve only as reminders of how grave the situation is and how much they have lost. For these individuals, evidence is all around that things are not what they once were. They may also see ways that their own lifestyle choices (e.g., smoking, diet) contributed to their illness and present circumstances, a realization that may yield shame and self-recrimination. The present circumstances, for these individuals, seem unworkable and a return to previous ways of living and interacting appears walled off.

The temptation for many family members and caregivers is to encourage the person with aphasia to "make the best of a bad situation." The problem with such approaches, however, is that many individuals may view the situation as untenable, and identifying their current problems may be a key part of grieving for the life they have lost. Continual mental struggles to "stay positive" and believe "things aren't as bad as they seem" may provide temporary relief, but the challenging day-to-day tasks of encountering life with aphasia remain. In the midst of these experiences, clients also receive clear and frequent cues from family members and friends that communication is difficult or frustrating. Efforts to discount or disprove one's all-or-nothing or "awfulizing" (Ellis, 1999) thoughts in such circumstances could seem arduous or futile.

New developments in cognitive-behavioral therapy have emphasized acceptance-based approaches to life struggles and related symptom distress. These approaches typically conceptualize the depressed individual's judgmental ruminations and struggles with cognitive distortions as distractions from present-moment experience. Two such approaches are mindfulness-based cognitive therapy (Segal, Williams, & Teasdale, 2013) and acceptance and commitment therapy (Hayes, Wilson, & Strosahl, 2011), both of which emphasize ways that overidentification with thought content or preoccupation with particular thoughts and feelings can reduce engagement in valued life activities (Zettle, 2007). For example, a person with aphasia might give priority to improving his or her self-esteem and avoid social situations until a more optimistic outlook and a feeling of confidence return. The cost of this social disengagement, however, may be further erosion of opportunities for reinforcement (e.g., spending more time at home alone; focusing on functional deficits).

Relational frame theory, the theory of language that informs acceptance and commitment therapy, suggests that coordinating stimuli in particular ways contributes rapidly to the development of behavioral rules (Törneke, 2010), which can serve to maintain depressive symptoms. Examples might include: "I feel so tired after going out. The activity is too much for me." or "Struggling is bad. No one should feel or

see frustration like this.” Such rule-making is a widespread, and perhaps indispensable, part of human experience, yet the life costs associated with adherence to such rules can be substantial.

Biophysiological processes also may contribute to the experience of depressive symptoms in persons with aphasia. Biomedical approaches to understanding depression often focus on organismic contributors to depressive symptoms, such as genetic predisposition or biological vulnerability. Few candidates for genetic or biological markers of depression susceptibility, however, have been identified (Ritschel et al., 2013), and research continues in the effort to ascertain predisposing factors that could meaningfully inform prevention and treatment. Thanks to extensive, direct-to-the-public advertising of antidepressant medications (Whitaker, 2010), many people are familiar with neurotransmitter-based theories of depression etiology (Stahl, 2013). The most popular of these neurotransmitter theories, which gained notice following the success of selective serotonin reuptake inhibitors (SSRIs), suggests that deficits in synaptic serotonin (or dopamine or norepinephrine) contribute to the development of depressive symptoms. Considerable research, however, suggests that there are no differences between depressed and non-depressed individuals in the availability of these neurotransmitters (Moncrieff, 2008; Whitaker, 2010), and it may be that symptom changes following use of antidepressant medications pertain to reductions in the distribution and volume of neurotransmitter receptors, which contribute to reductions in neurotransmitter activity rather than its increase. Recent trends in psychiatric research have highlighted changes in brain-derived neurotrophic factor (BDNF) resulting from the use of psychoactive medications (Stahl, 2013). It is possible that antidepressant medications contribute to more efficient production and distribution of BDNF and that this enhancement of neuronal functioning, in turn, contributes to more resilient stress responding among neural networks (Gonul et al., 2005; Ritschel et al., 2013).

Little is known about the efficacy of antidepressant treatment for persons with aphasia. Several studies have examined the use of antidepressant medications in the treatment of post-stroke depression (see Xu et al., 2016, for a review). These studies have shown efficacy for antidepressants relative to placebos in addressing mood symptoms but not in improving activities of daily living. Patients receiving antidepressants discontinued treatment at a significantly higher rate than controls because of difficulty tolerating antidepressant side effects. Few studies have specifically considered the effects of these treatments for individuals with post-stroke aphasia. One controlled trial (Laska et al., 2005) has examined the long-term influence of the monoamine oxidase inhibitor (MAO-I) moclobemide in the treatment of aphasia symptoms, but no difference between treatment and control groups was found after 6 months of pharmacotherapy.

Nonetheless, drawing on the literature concerning antidepressant medication for post-stroke depression, Wallesch, Müller, and Herrmann (1997) recommended the use of antidepressant medication for persons with aphasia meeting criteria for clinical depression.

Assessing Depression in Persons with Aphasia

While there are a couple of basic pictographic measures of “quality of life” that have been developed for persons with aphasia (Paul et al., 2004), to date, no valid evidence-based direct assessment of clinical depression in persons with chronic aphasia has been developed (Townend et al., 2010). To date, the published measures that are considered reliable for estimating the severity of depression in persons with stroke and aphasia are all caregiver observational reports, which are equivocal in their validity. Measures that have been developed have been inadequately studied, and much work needs to be done to develop psychometrically sound assessment tools (van Dijk, de Man-van Ginke, Hafsteinsdóttir, & Schuurmans, 2016). Some efforts have been made to create direct measures of depression in persons with aphasia based on the SCID, using combinations of simplified reading or simplified speech, even pictographs (Wolanin & Santo Pietro, 2013). None of these efforts, however, has proved successful for one fundamental reason—aphasia is a disorder of language. The person with aphasia cannot fully understand or explain to a clinician in language what is going on in his or her mind.

By extension, assessment problems may be one reason that persons with aphasia rarely receive psychotherapeutic treatment for depressive symptoms. There are relatively few assessments that examine depression in those with aphasia directly, with most measures relying on the observations of clinicians or other caregivers. The Stroke Aphasia Depression Questionnaire (SADQ; Sutcliffe & Lincoln, 1998), for example, was developed to detect depressive symptoms in patients following a stroke or living with aphasia. The original version is a 21-item measure completed by a caregiver based on observable symptoms. The SADQ-10 is a shortened version comprised of 10 items, whereas the SADQH-10 (Cobley et al., 2012) is a revised version that is to be completed by hospital staff. Research (Leeds, Meara, & Hobson, 2004) suggests this measure may not be effective for older adults with aphasic symptoms, as it demonstrates only a modest correlation with the Geriatric Depression Scale (GDS-15; Sheik & Yesavage, 1986), a commonly used screening tool for depression in older adults. In addition, others have noted that the SADQH-10 measure may not be psychometrically sound since it was validated with depression measures standardized on non-aphasic patients

(Laures-Gore, Farina, Moore, & Russell, 2017). The Aphasia Depression Rating Scale (ARDS; Benaim, Cailly, Perrenou, & Pelissier, 2004) was created to address this problem, though it was based on reports from psychiatrists and rehabilitation staff. In addition, this measure relies on observations from medical staff rather than self-report.

There are non-language-based measures available to assess depression, with the most popular being the Visual Analogue Mood Scale (VAMS; Folstein & Luria, 1973). This pictograph measure assesses eight moods (sad, happy, energetic, tired, angry, afraid, tense, and confused) based on visual points to represent feeling states. The visual points are dichotomous with opposing endpoints, such as “neutral” and “sad.” Although the VAMS addresses problems associated with loss of expressive language, research suggests that communication difficulties still influence VAMS scale scores, as patients with aphasia have demonstrated difficulty completing the scale (Price, Curless, & Rodgers, 1999). Individuals with aphasia may misunderstand the scale task because of problems related to understanding and responding to spoken or written instructions. Another concern with the VAMS is its tendency to reduce depressive symptoms to immediate mood states. Using a scale consisting of terms such as “sad” and “neutral” (or images designed to convey those terms) to assess depression may oversimplify the individual’s reported mood experience while missing other depressive symptoms entirely. Perhaps asking aphasic patients about their actions, sleep cycles, energy level through images or pictographs could improve the precision of a visual analog measure. More research is needed to adapt visual analog scales to the subtle communication deficits associated with aphasia and to capture a broader range of depressive symptoms.

Treating Depression in Persons with Aphasia

Although many psychologists and mental health treatment providers feel uncertain about how best to help a population that cannot participate in conventional “talk therapy,” there are evidence-based psychological interventions that hold promise for individuals with aphasia. Given that most individuals who have lost language functioning have also lost opportunities for accessing important social activities and functions, behavioral interventions that focus on finding opportunities for positive reinforcement, such as behavioral activation, are a logical place to start. Behavioral activation (Martell, Dimidjian, & Herman-Dunn, 2010; Sturmey, 2009) is an established cognitive-behavioral treatment for depression, which includes activity scheduling, graded task assignments (designed to break down overwhelming tasks into more manageable steps), and identification of barriers to activity and reinforcement. It has been demonstrated to be an effective intervention for a variety of special populations,

including older adults with cognitive difficulties (Teri, Logsdon, Uomoto, & McCurry, 1997) and trauma survivors with physical injuries (Wagner, Zatzick, Ghesquiere, & Jurkovich, 2007). Behavioral activation is highly consistent with the A-FROM model (Kagan et al., 2008), providing strategies that can maximize life participation across all of a person with aphasia’s social roles. As a structured cognitive-behavioral therapy, it can be delivered in a collaborative fashion using supported communication. Moreover, its flexible emphasis on engagement in life activities that the client finds important, as opposed to prescribed ways of thinking or acting, makes it possible to adapt behavioral activation to diverse contexts.

Recently, researchers have begun to explore the use of behavioral activation strategies specifically for treatment of depression in clients with post-stroke aphasia. Results of an initial randomized controlled trial (Thomas et al., 2013), involving 105 participants with aphasia, were promising, with clients completing an average of nine sessions over the course of a 3 month period and obtaining significantly better mood and self-esteem scores than those assigned to treatment as usual. Behavioral activation interventions can be employed in the context of individual psychotherapy or in a group setting (Sturmey, 2009). In addition, they could be used in an interprofessional setting with speech-language pathologists and clinical psychologists or other mental health providers collaborating to maximize communication and deliver the interventions as effectively as possible. Studies of interventions (Baker et al., 2018) for depression in individuals with aphasia suggest that psychotherapy is most effective for those with mild depressive symptoms and that evidence is lacking for interventions involving individuals with moderate-to-severe depression. These patients may require more intensive support and interventions.

As with any client, the first step when providing psychological services for a person with aphasia is taking the necessary time to understand the individual’s unique history and context. Although obtaining such history is not always a simple task and may involve interviews with family members, it will be useful for the clinician to understand how the person has responded to previous life stressors and disruptions. In addition, it may be useful to know whether the individual experienced adversity, such as abuse or neglect, in early life, which could establish a predisposition for stress reactivity (Ege, Messias, Thapa, & Krain, 2015; Heim et al., 2002). Interviewing the client and, with proper consent, family members about these events must be done with sensitivity, but the information gained could help in explaining the conceptualization of depressive symptoms. Behavioral approaches to understanding depression consider the relationship between the individual and his or her context. Thus, changes in social roles and important areas of functioning are crucial factors to consider when exploring

the contributors to depressive symptoms in persons with aphasia. Supported communication strategies (Kagan et al., 2001), including use of keywords, acknowledging competencies (e.g., letting the individual know when he or she has been understood), asking multiple yes or no “closed” questions rather than open questions, use of drawings and pictographs where appropriate, and other techniques, can facilitate an effective interview.

Once the details of the individual’s history and context have been gathered, clinicians must consider how to target depressive symptoms while clients are adjusting to significant life changes. Behavioral activation assumes that “the key to changing how people feel is helping them change what they do” (Martell et al., 2010, p. 22). Moreover, behavioral activation assumes that withdrawal from social roles and tasks is most likely to keep a person stuck in depression because an inactive life offers few opportunities for reinforcement. The goal of the clinician, therefore, becomes collaborating with the client to identify activities that could serve as a “behavioral antidepressant” (Martell et al., 2010, p. 25). Typically, the place to start is finding out what the person with aphasia has done in the past and what the person is doing now. In each case, it is useful to review with the person how he or she felt before and after engaging in activities, explicitly noting whether a given behavior had an effect on rewards or stressors (i.e., punishments) in the person’s daily life. Working through several examples of the client’s past and current behaviors from this perspective helps the individual begin to look at his or her behavior in functional analytic terms, considering the antecedents, behavior, and consequences. When working with persons with aphasia, clinicians may need to work slowly through this portion of the treatment. Successful therapy may hinge on taking the time to ask questions in a way that the person with aphasia can answer—and making an effort to remain patient, so that the individual does not feel rushed or compelled to assent or passively withdraw when communication efforts use up considerable session time.

There are five principal components to a behavioral activation treatment program: (a) activity scheduling, (b) mood and function monitoring, (c) structuring and grading tasks, (d) solving problems, and (e) promoting attention to experience. The activity scheduling adopts what Martell et al. (2010) identify as an “outside-in” (p. 92) approach. That is, it asks the individual to develop and adhere to the activity schedule despite what he or she may be experiencing emotionally. Even if the person with aphasia is experiencing dejection, fatigue, or loss of interest, it is important to stay with the schedule of potentially mood-enhancing life participation activities. The goal is for the person’s activities to follow the schedule rather than his or her mood. If the person with aphasia has identified spending time with his or her grandchildren as meaningful and enjoyable, it is vital

to follow-through on that activity even if the day starts out poorly or communication difficulties arise. In working with persons with aphasia, clinicians should develop 7 day activity schedules just as they would with depressed individuals who do not struggle with aphasia. The schedule can serve as a guide for the day, with the client indicating the time and duration of each activity. In addition, it is important for the person with aphasia to monitor and make note of his or her mood and satisfaction before and after each activity, observing whether there is any change as functioning increases. Creativity may be required if the person with aphasia has difficulty writing or making records of the activity. Also, it is important to note that scheduled behaviors may have to occur numerous times before changes in mood occur; the more important objective is functioning (i.e., engaging in the life activities that the person with aphasia has identified as worthwhile and important).

When making use of a behavioral activation approach, it is important to remember that life participation under the control of positive reinforcement is generally mood enhancing (Lewinsohn, 1974). Setting activity goals that are overly ambitious or complex is unlikely to prove useful and could even exacerbate the person with aphasia’s depressed mood. The goal, instead, is to start small, with readily achievable behavioral goals (Martell et al., 2010). If larger tasks must be accomplished, it is useful to “grade” these activities (i.e., break them down into more readily achievable segments or components). For example, if the activity to be added to the schedule involves making contact with people that the person with aphasia has not seen since before his or her injury, it will likely prove more effective to attempt contact with one or two people per week rather than one person per day. In scheduling the contact, it could be helpful to set a specific day and time when the person with aphasia will make the attempt, enlisting the support of caregivers or family members as needed. The plan should involve a follow-through, such as a brief meeting for coffee or in-person visit. Once one visit has been completed, the next cycle of making contact can begin. After the individual has traversed this process a few times, the frequency of scheduled contacts, number of people to be contacted, and duration of the in-person meetings can be increased. If tasks are not successfully completed, further refinement of the grading process may be needed to make tasks more manageable. Alternatively, additional evaluation of a task and its consequences may be needed to ascertain what is going wrong. Again, these aspects of the therapeutic process are likely to take additional time when working with persons with aphasia. The cognitive-behavioral therapist accustomed to brief interventions and rapid treatment gains must exercise caution and adapt expectations to the needs of persons with aphasia. Talking too quickly, attempting to engage in complex verbal problem-solving, and expressing disappointment

with treatment outcomes that result from miscommunication could undermine the therapeutic relationship and lead the person with aphasia to become discouraged.

That said, problems will likely arise along the way as the person with aphasia attempts to adhere to the behavioral activity schedule. When problem behaviors (e.g., watching TV, staying in bed) occur, the clinician and client collaborate on resolving them. Often these avoidant or disengaged behaviors are accompanied by worry or rumination. These forms of thinking typically feature the unhelpful thinking styles that Beck and Ellis identified. For example, a person with aphasia may find themselves engaged in “fortune telling” and anticipation of imagined negative consequences (e.g., “What if my situation never improves?” “What if I always feel this way?”) or “jumping to conclusions” (e.g., “I will never be able to do this.” “This treatment will never work.”). “Awfulizing” is a common response when a person is facing significant losses. A person with aphasia may find it all too easy to access thoughts such as “I can’t stand this” and “No one can understand how bad my situation is.” Persistent rumination about distress (e.g., “Why did this happen to me?” “What’s wrong with me?”) can also become an obstacle to life participation. A patient, supportive, candid, and collaborative approach to these obstacles can help keep the intervention on-track and reassure the person with aphasia that the treatment is directly addressing the sources of suffering he or she faces—rather than merely promoting a positive outlook.

In behavioral activation, the approach taken toward these negative patterns of thought is the same as that used with any other form of activity—examination of the behavior’s antecedents and consequences. Considering the usefulness of a particular line of thinking in terms of its effects on mood and activity will give the person with aphasia the opportunity to disconnect from patterns of worry or rumination. In keeping with contemporary developments in cognitive-behavioral approaches (Hayes et al., 2011, Zettle, 2007), the objective is not to struggle with particular thoughts or alter them in some way. It is worth noting that attempting to alter or “restructure” thinking would likely involve extended dialogue and complex verbal interactions, which could be challenging when working with persons with aphasia. The behavioral activation approach, instead, emphasizes observation of the behavior and consideration of whether it assists or hinders life participation. The direct simplicity and practicality of this approach may appeal to individuals with aphasia and could facilitate effective therapeutic communication.

Martell, Addis, and Jacobson (2001) present a model using the acronym “ACTION” to assist clients with navigating obstacles in their effort to develop new, more effective behavioral repertoires. The six steps in this process are (a) assessment, (b) choosing, (c) trying, (d) integration, (e) observation, and (f) never giving up. In assessment, the

clinician and person with aphasia consider together the function of the behavior, including its consequences and whether it is serving to activate or depress. Choosing involves exercising personal agency to select a behavior consistent with increased activation and the person with aphasia’s long-term goals. The trying step involves cultivating the willingness to experiment and commitment to taking action (i.e., engaging in the scheduled activity) even when mood and energy are low. Integration refers to strategies for incorporating the new behavior into a routine, making it a task that the individual with aphasia performs frequently and regularly. The emphasis here is on the importance of repetition for the consequences of behaviors to have their full effects. Observation entails making a note of the mood effects associated with a specific behavior, including any awareness that the person with aphasia has about what might make a particular behavior more effective. Finally, never giving up addresses the person with aphasia’s commitment to follow-through with the process, continually identifying activities that could have beneficial mood effects or contribute in meaningful ways to his or her overall functioning. The last step evokes an important concept in recovery from both physical illness and depression—resilience. Cultivating resilience and a flexible response to life changes, however profound these might be (and for many individuals with aphasia, the gravity of the loss cannot be exaggerated), is the hallmark of success in behavioral activation (Holland, 2010).

The success of behavioral activation depends substantially on the person with aphasia’s awareness of his or her context. For this reason, strategies for enhancing engagement with present-moment experience may prove helpful. Examples of such strategies include mindfulness meditation and other practices promoting mind-body awareness, such as yoga or tai-chi. Training in these skills could lead to heightened awareness of experience, leading to a more nuanced perspective. Many individuals experiencing depressive symptoms assume that the low mood they are experiencing is continuous and unmitigated. Tracking experience more closely can give people with depressed mood an opportunity to see the subtle variations in their mood and recognize that they are not “always” depressed. Contact with the contingencies that influence behavior (i.e., recognition of the situations in which behavior is more or less likely to occur) can often lead to recognition of new possibilities and opportunities for more flexible responding (Segal et al., 2013). Many of the techniques associated with mindfulness-based therapies (e.g., meditation on the breath, walking meditation, gentle stretching, mindful eating, or sipping) can be adapted for work with persons with aphasia. Numerous strategies have been identified for modifying these practices to meet the needs of special populations including frail elders or individuals with physical limitations (McBee, 2008). The goal in all of these practices is to enhance the

person with aphasia's engagement in present-moment experience and heighten awareness of both the situational context and inner experience. Close observation of experience as it unfolds will enrich the activities in which the person with aphasia engages and promote careful monitoring of the consequences of each activity.

Conclusion

Persons with aphasia face profound losses and life changes as they attempt to navigate the world without the communication abilities that have served them throughout their lives. The high incidence of depression among persons with aphasia may result from the loss of social and work relationships and the opportunities for reinforcement those entail, along with feelings of helplessness associated with the inability to overcome newfound communication deficits. Social marginalization of individuals with aphasia, along with the lack of training in the treatment of persons with aphasia among mental health professionals, has left many individuals who are experiencing depressive symptoms without treatment. Detailed consideration of the behavioral sources of depressive symptoms among individuals with aphasia, as well as a recognition of the common aims of life participation interventions employed by speech–language pathologists and behavioral activation interventions for depression, could contribute to development and delivery of effective, socially engaging psychological treatments for persons with aphasia and depression.

Compliance with Ethical Standards

Conflict of interest Mary Jo Santo Pietro, Donald R. Marks, and Ashlyne Mullen have no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human participants or animals performed by the authors.

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