Optimizing the Experience of Flow for Adults With Aphasia

A Focus on Environmental Factors

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Flow has been described as positive experiences of intense concentration, distorted time passage, and a loss of self-consciousness that result from matching task difficulty to a person’s skill level. It has been studied in many different populations and has been associated with a number of positive outcomes, including improved life satisfaction and well-being, enhancement of identity, and the development of skills. Although flow has been identified as being important for adults with aphasia, it had not been studied in this population until recently. In this article, the authors describe the concept of flow and explain why it is important for clinicians to consider when working with adults with aphasia. Next, the authors review the literature related to barriers and facilitators that influence the experience of flow for adults with aphasia and conclude by identifying clinical implications for optimizing the experience of flow in this population. Key words: aphasia, barriers, engagement, environmental factors, facilitators, flow, participation, stroke

There are times in people’s lives when they are so absorbed in what they are doing that they lose track of time, yet still sense that they are in control. On occasions characterized as flow, the task at hand is difficult, but manageable with effort and concentration. Upon accomplishing the task—be it a morning swim, a stimulating discussion with friends, or a challenging home improvement project—there is a sense of accomplishment, and that sense of accomplishment is motivating. Time passes differently and people become less aware of the environment around them. There is a feeling of challenge without being overwhelmed.

These optimal experiences were described and labeled originally as “flow” by Csikszentmihalyi (1975). Flow can occur when the challenge matches a person’s abilities, regardless of the individual’s skill level (Lyon, 2000). As one research participant with aphasia explained, “Well, there’s times when you don’t even think of what aphasia is” (Sather, 2015). That is, the participant described a time when she was so consumed in a task that she was not thinking about her own communication difficulties. Perhaps flow has implications for people with aphasia that can lower barriers to participation.
That possibility is the essential question that drove the two studies summarized in the current discussion of flow and aphasia.

The experience of flow has been associated with a number of positive outcomes including improved life satisfaction (Csikszentmihalyi, 2008), skill development, and the enhancement of identity (Della Fave, 2009). Lyon (1998) suggested that all people, including adults with aphasia and their family members, need frequent and predictable periods in their lives when they can experience flow, “when the actual act of participating in life dominates self-awareness, self-consciousness, and even awareness of reward” (p. 222).

Flow has been studied extensively within a wide range of situations including work (Bauman & Scheffer, 2010; Csikszentmihalyi & Csikszentmihalyi, 1988), leisure (Csikszentmihalyi & LeFevre, 1989), academic learning (Peterson & Miller, 2004), musical training (Macdonald, Byrne, & Carlton, 2006), elite athletic training (Jackson, Eklund, & Martin, 2010), and Web site building and online experiences (Sicilia & Ruiz, 2007). In addition, flow research has focused on a variety of populations including chess players (Csikszentmihalyi, 1975), artists (Csikszentmihalyi, 1997), surgeons (Delle Fave & Massimini, 2003), and blue-collar workers (Csikszentmihalyi & Csikszentmihalyi, 1988).

Research on flow also has focused on individuals with a variety of health conditions, including cancer (Reynolds & Prior, 2006), achondroplasia (Cortinovis, Luraschi, Intini, Sess, & Delle Fave, 2011), hereditary spastic paraparesis (Delle Fave, Fiano, & Sartoni, 2015), spinal cord injury (Baker, Rickard, Tamplin, & Roddy, 2015), intellectual disability (Soltani, Roslan, Abdullah, & Jan, 2011), blindness (Delle Fave & Massimini, 2004), acquired brain injury (Baker et al., 2015; Yoshida et al., 2014), and adults in an inpatient psychiatric unit (Silverman, Baker, & MacDonald, 2016). Throughout these studies, concepts of flow were integrated into the individual’s health experience. For example, Yoshida et al. (2014) compared the benefits of flow versus nonflow conditions on visual attention accuracy and speed of performance among individuals with acquired brain injury. The experimental task was designed to support flow by adjusting task difficulty based on performance during computer-delivered visual attention tasks, and by providing the user with feedback on performance throughout the tasks. In the control task, difficulty was not altered based on performance nor was feedback on performance provided. The authors concluded greater effectiveness in the flow experience task versus the control task based on neuropsychological testing for the two participants involved.

Reynolds and Prior (2006) completed qualitative interviews with 10 women who had been living with cancer for at least 1 year and who were involved in visual arts with the goal to better understand the potential influences of their health and their art on flow experiences. Participants identified multiple exemplars of the components of flow when doing their art. Reynolds and Prior (2006) concluded that “Flow-like experiences had a particular therapeutic value for the participants living with cancer in helping to block out worries about illness for the duration of the activity, building a positive self-image that resisted definition by cancer and enhancing subjective control and mastery” (p. 7).

Although flow has been identified as being important for people with aphasia (Holland, 2007; Holland & Nelson, 2013; Lyon, 1998, 2000; Lyon et al., 1997; Rotherham, Howe, & Tillard, 2015), until recently, it had not been studied in-depth within this population (Sather, 2015). In this article, we describe the concept of flow and explain why it is useful for speech-language pathologists to consider when working with adults with aphasia. Then, we highlight two recent studies that included a focus on barriers and facilitators that influence the experience of flow for adults with aphasia. We conclude by identifying clinical implications for
optimizing the experience of flow in individuals with aphasia based on the research in the field.

**THE CONCEPT OF FLOW**

Research over 40 years suggests that the experience of flow is consistent regardless of culture, socioeconomic status, age, gender (Nakamura & Csikszentmihalyi, 2002), or activity (Csikszentmihalyi, 2008). Csikszentmihalyi (2008) has identified eight dimensions of flow that are present regardless of the individual or setting in which the flow experience occurs. These dimensions include a match between the person’s skills and the task difficulty, concentration on the task at hand, loss of self-consciousness, autotelic experience (doing a task for the sake of doing the task), merging of action and awareness, a sense of control, clear feedback and goals, and change in perception of how time passes.

Recent investigations have examined the neurophysiological and neurochemical changes associated with flow (Peifer, 2012; Ulrich, Keller, Hoenig, Waller, & Gron, 2013). Ulrich et al. (2013) found that flow experiences were associated with increases in neural activity in the left anterior inferior frontal gyrus and left putamen. These researchers postulated that the changes in these brain regions reflected psychological processes that map on to dimensions of flow such as a deeper sense of cognitive control, decreased negative arousal, and self-referential processing.

Whereas the general definition and concept of flow has changed minimally since Csikszentmihalyi’s original work in 1975 (Moneta, 2012), multiple assessment constructs and measures have been developed since that time to extend the concept. One example is the quadrant model of flow (Csikszentmihalyi & LeFevre, 1989; see Figure 1). This model involves two major dimensions: (1) perceived skill from low to high on the x-axis and (2) perceived challenge from low to high on the y-axis. In this model, flow is defined as the optimal, but necessary, balance of a high-skill, high-challenge experience. The intersection of the dimensions of skill and challenge results in four quadrants: flow (when perceived skill and challenge are balanced), anxiety (when challenge exceeds skill), boredom (when skill exceeds challenge), or apathy (when both skill and challenge are low). An example of a flow experience might be a person with mild aphasia giving a speech in a supported communication Toastmaster’s group. An experience associated with anxiety might occur when a person with moderate aphasia participates in a large community planning meeting that does not include any accommodations to support the person’s communication abilities. A person with mild reading comprehension impairments might experience boredom when reading an oversimplified version of a book chapter from an aphasia book group. Finally, experiences in the low-skill, low-challenge quadrant, which is associated with apathy, might occur when a person with aphasia is passively watching television.

Some researchers have suggested that the high-skill, low-challenge quadrant should be relabeled as “relaxation,” rather than “boredom” (Nakamura & Csikszentmihalyi, 2002). In a high-skill, low-challenge situation, some individuals may experience relaxation. For example, a skilled skier enjoying the
relaxation of an easier downhill course, or a skilled musician enjoying a break from intense focus on a challenging piece by playing a less challenging piece, would be illustrations of the relaxation state.

The quadrant model of flow has been criticized because it only provides an approximation of flow experiences and may overestimate occurrences of flow (Moneta, 2012). However, despite these criticisms, the model has been useful for flow research because the classification system is simple and allows for discrete operationalization of flow experiences.

**IMPORTANCE OF FLOW FOR ADULTS WITH APHASIA**

There are a number of reasons why flow may be important to consider when working with individuals with aphasia. First, flow experiences are typically associated with positive emotions including enjoyment, satisfaction, and reward (Engeser & Schiepe-Tiska, 2012). Such experiences may be relevant, especially for adults with aphasia, as they may experience increased risk of psychological distress and compromised quality of life (Hilari, 2011), and a reduction in social networks (Hilari & Northcott, 2006). As Lyon (1998) suggested, “It is precisely this quality of ‘flow’ that is often most absent and most sought after by those coping with the enduring effects of aphasia” (p. xvi). Grohn, Worrall, Simmons-Mackie, and Hudson (2014) found that engagement in meaningful activities was perceived by adults with aphasia to help them live successfully with the communication disorder during the first year poststroke. These researchers reported that the study participants “appeared to actively challenge themselves and incorporated practice of both communication and physical activities into their everyday life” (p. 1414). Similarly, Brown, Worrall, Davidson, and Howe (2012) found that adults with aphasia perceived that doing things, including participating in activities that provided stimulation for the brain and focused on ability and achievement, helped them to live successfully with aphasia. The findings from these two studies overlap with some of the key dimensions of flow. Although a causal relationship between flow and positive emotions has not been identified, the experience of flow may provide some indirect benefits for enhancing well-being.

Quality of participation, rather than just quantity of participation, is important for individuals with aphasia. Using qualitative methods to study social participation, one group of researchers concluded that people with aphasia perceive the quality of engagement in activities in social/life domains as more important than the quantity of activities (Dalemans, deWitte, Wade, & van den Heuvel, 2010). Another research team found that being “satisfied with their community participation, roles, and relationships” (p. 21) was one of 51 essential treatment outcomes considered by an international sample of clinicians and managers working in aphasia rehabilitation to be important for adults with aphasia (Wallace, Worrall, Rose, & Le Dorze, 2016).

One method for improving the quality of participation could involve ensuring that adults with aphasia have more opportunities to be involved in activities that help them to experience flow (Lyon, 1998).

Additional benefits of flow relate to its association with identity enhancement (Delle Fave, 2009) and positive identity (Mao, Roberts, Pagliaro, Csikszentmihalyi, & Bonaiuto, 2016). Individuals with aphasia often experience a diminished sense of self or “identity theft” poststroke (Shadden, 2005). As noted by Lyon et al. (1997), flow experiences may help individuals with aphasia reduce the awareness of their communication disabilities:

Communication Partners [program for enhancing participation and well-being] was most effective when the adults with aphasia became so immersed in the act of doing that they momentarily lost all sense of themselves... As a key component to treatment, these adults appeared to temporarily suspend any awareness that they were communica-tively disabled. (p. 703)
Finally, flow experiences also may be useful for adults with aphasia in the development and cultivation of skills. Flow experiences may promote the development of skills through repetition and return to those skill-building activities from which flow is experienced (Delle Fave, 2009). The development of these skills may occur because of the positive and rewarding characteristics of flow. Studies across cultures and across populations support the notion that flow can foster optimal functioning as well as skill improvement regardless of performance success (e.g., Delle Fave, 2013; Landhauser & Keller, 2012).

TWO STUDIES OF ENVIRONMENTAL FACTORS THAT INFLUENCE THE EXPERIENCE OF FLOW ON ADULTS WITH APHASIA

Study one: Evidence of environmental factors in flow using the experience sampling method

The information reported here is drawn from two investigations on the experience of flow in adults with aphasia, both of which were conducted using procedures approved by two universities’ Human Subjects Institutional Review Board (Sather, 2015). The first study used the experience sampling method (ESM), which involved prompting nine participants with mild aphasia poststroke at random times during the day to provide ratings about their daily activities in real time over the course of 1 week. The ESM is commonly used in flow research because it is well suited for gathering data about how individuals perceive the context and content of their daily lives and is less subject to memory bias relative to other self-report methods (Hektner, Schmidt, & Csikszentmihalyi, 2007; Scollon, Kim-Prieto, & Diener, 2003).

This study used an iOS platform application (app), the FlowAphasia app (see Figure 2), which was developed specifically for the study of flow experiences among people with aphasia. The first author designed the app using aphasia-friendly design principles (Dalemans, Wade, van den Heuvel, & de Witte, 2009; Rose, Worrall, Hickson & Hoffman, 2011) with consultation by the coauthors and modified it based on pilot trials by people with aphasia.

Using the ESM approach, the app was programmed to randomly signal each participant six times per day via an alert (tone, vibration, or both depending on participant preference). Participants were oriented to the app by the first author, and demonstrated appropriate operational competencies necessary to iOS and FlowAphasia app operation (e.g., powering on and off, charging, and swiping). Ratings were completed at each signaling period using the vertical, touch-sensitive slider bar within the app for each question. At each signaling period, the participants were asked to rate their perceived skill level (i.e., “How much skill do you have in this task?”) and their perceived challenge level of the task at hand (i.e., “How challenging is the task you are doing?”).
doing?"), as well as to identify whether they were alone or with someone. Participants also were asked to rate four environmental factors that had been selected based on previous research on barriers and facilitators that influence the community participation of adults with aphasia (Howe, Worrall, & Hickson, 2008a, 2008b). These were as follows: (1) Support available for communication (i.e., "How much communication support do you have right now?"); (2) others’ awareness of aphasia (i.e., "How much do the people around you right now know about aphasia?"); (3) presence of time pressure (i.e., "How much time pressure for communication do you feel?"); and (4) presence of complex communication (i.e., "How complex is the communication right now?"; see Figure 3).

At each sampling point, ratings for the individual questions for each participant were converted to z-scores as described by prior researchers who have studied flow (Hektner et al., 2007; Moneta, 2012). Using this technique, the values for each variable on an individual level are converted into z-scores by subtracting each value from the mean of the individual’s ratings for that item, and dividing by its standard deviation. As a result, the mean skill and mean challenge for each participant is zero (Bassi & Delle Fave, 2012). Following standard practice, the z-scores for the skill and challenge questions also were operationalized at the subject level as flow (high skill, high challenge), anxiety (low skill, high challenge), boredom (high skill, low challenge), and apathy (low skill, low challenge) based on the previously discussed quadrant model (Bassi & Delle Fave, 2012).

Results from the ESM quantitative study suggested that all nine participants with aphasia experienced flow, and all individuals met the criterion of flow as defined by the quadrant model (high skill/high challenge) for at least some reported time-sampled moments. Flow occurrences for the individual participants ranged from 7.9% to 59.3% of sampled events over the course of the week. An aggregated percentage of occurrences across all participants revealed that the quadrant experience of apathy occurred most frequently (31.6% of sampled events), followed by flow (27.3%), boredom (23%), and anxiety (18.1%). Because these moments were sampled randomly throughout the waking day, it is not surprising that a variety of states was reported.

Environmental factor results from the study included findings about the presence of other people as well as the occurrences of perceived environmental factors associated with each of the four quadrant experiences. Fifty-nine percent of the time individuals were alone during the quadrant experience of flow. Environments that were perceived to have a lack of time pressure for communication were more often associated with the low-challenge quadrant experiences of boredom and apathy (88.6% and 82.3% of sampling occurrences, respectively) than with the high-challenge quadrant experiences of flow and anxiety (50.6% and 49.1% of sampling occurrences, respectively). The occurrences of perceived environmental factors were
similar for the two high-challenge quadrant experiences, flow and anxiety, but different for the two low-challenge quadrant experiences, boredom and apathy, which also were similar to each other. Similarly, environments that were perceived to have a lack of complex communication were more often associated with the low-challenge quadrant experiences of boredom and apathy (82.9% and 87.5% of sampling occurrences, respectively) than with the high-challenge quadrant experiences of flow and anxiety (59% and 49.1% of sampling occurrences, respectively). It is possible that the presence of time pressure for communication and a degree of communication complexity may have a role in facilitating the high-challenge, high-skill quadrant experience of flow.

In addition, there were other differences between the high-challenge flow/anxiety quadrant experiences and the low-challenge boredom/apathy quadrant experiences in relation to environmental factors. Environments that were perceived to have more communication support also were more often associated with the high-challenge quadrant experiences of flow and anxiety (47% and 38.2% of sampling occurrences respectively) than with the low-challenge quadrant experiences of boredom and apathy (17.1% and 19.8% of sampling occurrences, respectively). The occurrences of perceived presence of communication support were highest during the quadrant experiences of flow. It is possible that the presence of adequate communication support, while not avoiding communicative opportunities, may play a role in facilitating flow.

Study two: Evidence of environmental factors in flow using qualitative interviewing

At the conclusion of the ESM quantitative study, a second qualitative investigation was conducted to explore the participants’ experiences of flow (Sather, 2015). In the qualitative study, the nine participants from the first investigation participated in individual semistructured interviews that covered a range of topics including their perceptions of the barriers and facilitators that influence the experience of flow.

Interviews were conducted by the first author using supported conversation techniques (Kagan, 1998) and multimodal communication strategies (Luck & Rose, 2007) in order to maximize communication and support participants with aphasia in the interview. The interviews were transcribed verbatim and analyzed using qualitative content analysis, as described by Graneheim and Lundman (2004). Some of the study findings related to the perceived facilitators and barriers to flow are presented below.

Perceived facilitators to flow

From the qualitative interviews, several perceived facilitators to experiencing flow became apparent. These facilitators included task characteristics, other people, and the physical environment. Task characteristics referred to the ways in which people can modify tasks to accommodate the person’s current skill level. Participants provided multiple examples of tasks that could be modified to support the experience of flow by reducing or increasing the complexity of the task (e.g., adapting the complexity of homemade card-making tasks to ensure success) or by adapting physical aspects of the task (e.g., using one hand to chop wood). The category also included tasks that involved skill improvement (e.g., “[iPad games] helped to get my spelling skills better”) and tasks at which persons perceived they could be successful (e.g., “Um, at the [volunteer community] meeting it was hard, but it was successful. And I think that’s part of it”).

Tasks that the researchers determined to be adjuncts to the primary task were included within this category as well. For example, one participant indicated that looking for ideas on Pinterest (an adjunct task that induced flow) for card-making (a primary task that induced flow) facilitated further opportunities for flow. Task characteristics also included the types of tasks that participants identified as facilitating flow. Participants identified flow experiences during both verbal (e.g.,
conversation) and nonverbal tasks (e.g., exercises at the pool) as well as with tasks that had an end product (e.g., “But that if something comes out of it [flow], that helps a lot”) and those that did not (e.g., talking with family).

Facilitators related to other people included the presence of effective communication partners (e.g., “Um [name] and um [name], um um they’ll give me a chance to, to um tell them what I’m gonna do or de- describe it to them ah, what I’m gonna do and then they’ll take a guess”) and the presence of other people who knew that the participant had aphasia (e.g., “I was in my . . . zone of my words with aphasia because everybody knew what had happened . . . ”). One participant indicated that she experienced flow in her aphasia group, but that she rarely experienced it in any other situations. Some participants indicated that having other people around helped them to experience flow (e.g., “But then we lose track of time when we’re playing cards just my friend and I together, when we’re playing the dice game with her brother and sister-in-law . . . ”), whereas others reported that it was easier for them to experience flow when they were alone. One participant stated that being alone or being with someone could facilitate flow depending on the situation.

The physical environment was also identified as a facilitator. Participants identified aspects of the environment that supported flow experiences, including location (e.g., community events, home, and garden) as well as degree of noise present in the location (“I don’t like quiet”). In addition, the perceived demands of certain environments were considered more desirable than other environments.

**Perceived barriers to flow**

Barriers to flow reported by participants related to environmental factors involved task characteristics, a mismatch of demands, other people, and physical aspects of the environment. Barriers related to task characteristics included tasks without deadlines. To explain this, some participants reported that, without the constraints of deadlines, it was less likely that they would complete the task, particularly if it became more challenging. Other barriers reported by participants were tasks associated with financial costs and tasks that required rapid responses. An example of this is the following excerpt:

And I was [name of occupation] and you had to get [snaps fingers]ah, corrections all the time . . . at your fingertips [snaps fingers] . . . I can’t do that [occupation description] anymore. Umm, and sometimes when I teach with um my friends want me to do a big work with them. Well it’s a little tricky sometimes you know but you know we we do it, but it’s a challenge. So difficult for the flow, you know.

Some individuals indicated that tasks that were unfamiliar posed barriers (e.g., “If I’m not in flow with um anything uh that uh uh comes up as a change”), whereas others reported that it was more difficult to experience flow with tasks that were too familiar.

The category of mismatch of demands included tasks that were too demanding for the participants given their skill level (e.g., “The thing about being in the flow. If you go to something that’s really hard, you don’t want to do”). A mismatch of physical demands was identified relating to exercise classes (e.g., “So I can’t keep up so much. Because my body is not ready yet”). Busy environments were identified as barriers by some participants (e.g., “And I, you know I don’t really like to come here because it’s so busy. So I try not to get wrapped up in traffic and I don’t go to malls”). Barriers relating to other people included other people’s negative behaviors that were perceived to make it hard for the person to experience flow such as friends who did not show interest in the individual (e.g., “They know I’ve had a stroke, and they just kind of ignore me, and then I feel bad, and then I just go off by myself and read my book”).

Individuals with aphasia reported many factors that influenced the occurrence of flow experiences. The physical environment, task characteristics, and other people were identified as both facilitators and barriers to flow experiences. Mismatch of demands was
identified as an additional barrier to flow as it related to either excessive challenge or inadequate challenge.

These environmental factors that were identified as impacting flow experiences are largely modifiable and warrant consideration to support flow among individuals with aphasia.

**CLINICAL IMPLICATIONS**

By considering environmental factors that facilitate flow, clinicians can help individuals with aphasia to have more optimal experiences in their daily lives. Flow interventions in fields such as education, civil service, industry, and psychotherapy have involved modifying environments to support flow (Nakamura & Csikszentmihalyi, 2002). The universal nature and consistency of flow experiences and descriptions across multiple populations (Csikszentmihalyi & Nakamura, 2005) support the notion of applying a similar approach to working with adults with aphasia. Clinicians can work with people with aphasia, their families, and other health professionals such as occupational therapists or recreational therapists to modify environmental factors that can support the clients’ experiences of flow (Law, 1991).

A key facilitator in this process is the clinician. Clinicians can help adults with aphasia to become more aware of activities in which they might experience flow. As one research participant noted, “I’m a just getting used to...the flowing experience...I’ll learn to think about it...experience it a little more” (Sather, 2015). Individuals with acquired disabilities often can identify and develop new opportunities that match their altered skill levels for optimal experience after the onset of their disability (Delle Fave et al., 2015). However, communication difficulties may make it more difficult for many adults with aphasia to do this. The many communication steps involved in participating in activities (e.g., obtaining information online, using the telephone, and filling in forms) may make it harder for people with aphasia to actively organize their own leisure time and social activities (Howe et al., 2008a; Parr, Byng, & Gilpin, 1997; Rotherham et al., 2015). As a result, clinicians may need to play a role in supporting individuals with aphasia to identify and arrange suitable opportunities for experiencing flow. It is critical that clinicians consider that an integral aspect of flow is the presence of challenge, and that too-little challenge may result in boredom or apathy rather than flow experiences.

To identify activities of interest, Lyon (2000) recommended probing the individual and his or her family in relation to pre-stroke interests or activities, areas of unexplored interest, achievable components of previous activities of interest, and opportunities to help others through volunteering. According to Lyon (2000), the key to this process is helping the person with aphasia to focus on the act of doing something of personal choice that is challenging, yet matches his or her current skills. Lyon (2000) described a man with aphasia and hemiparesis, discoordination, and bodily instability who had enjoyed playing golf pre-stroke, but who rejected the notion after his stroke. Lyon supported the individual to reframe his focus by identifying golfing challenges that matched his post-stroke physical abilities. Eventually, after months of practice, the man perfected a one-handed golf swing. He reported that hitting the golf ball one-handed straight consistently for 50 yards required much more skill than it did to hit a two-handed shot of 250 yards prior to his stroke, providing a new opportunity for flow.

When identifying appropriate activities for inducing flow, clinicians also can encourage clients to think of pursuits that focus on their strengths (Holland & Nelson, 2013). The studies on which this article is based revealed that flow could be associated with both verbal and nonverbal tasks and could be done alone or with other people. Thus, the range of participation activities to be explored with individuals as flow inducing experiences could be broad. Activities that are easily modified, have an end product, involve skill improvement, and are adjuncts to a primary activity
(e.g., watching YouTube clips on cooking if the individual experiences flow during cooking) also may be useful to consider.

Clinicians also may support individuals with mild aphasia to become aware of flow in their daily lives by asking them to record times when they experience flow during the day in an aphasia-friendly diary or an app such as the FlowAphasia app described previously. This information could then be used to prompt a discussion with the client to identify further opportunities for optimizing flow experiences. Clinicians might also work with individuals with aphasia to explore multiple contexts for participating in activities that may provide them with a sense of flow. Possibilities include aphasia centers (Elman, 2016), community music and art programs for adults poststroke (Duchan, Jennings, Barrett, & Butler, 2006; Tamplin, Baker, Jones, Way, & Lee, 2013), and conferences for adults with aphasia and their families (Australian Aphasia Association, 2016).

Aphasia camps (Hoepner, Clark, Sather & Knutson, 2012; Kim, Ruelling, Garcia & Kajner, 2016; Sather, Nelson, & Clark, 2012) offer another unique environment that can provide opportunities for individuals with aphasia to attempt a variety of activities (e.g., archery, art, yoga, and canoeing) that may induce flow. The number of aphasia camps is growing across North America including ones in Oregon, Wisconsin, Maine, Nova Scotia, Ontario, Alberta, and British Columbia. A pilot study on flow at the Chippewa Valley Aphasia Camp in Wisconsin revealed that adults with aphasia were able to identify multiple occurrences of flow while participating in the camp (Sather et al., 2012). Clinicians can work with advocacy organizations and other health professionals such as occupational therapists, recreational therapists, and music therapists to advocate for and support the development of these types of options.

Within aphasia camps, aphasia centers, and community programs, it is important to consider offering activities at different levels of challenge to ensure that adults with aphasia have options to participate in activities that match their ability levels. In 2014, the Chippewa Valley Aphasia Camp planning board, of which the first author is a member, set out explicitly to increase opportunities for challenge at their annual aphasia camp. “Challenge by Choice” (Mishna, Michalski, & Cummings, 2000) was selected as the theme for camp that year, and specific plans and activities were incorporated to ensure the likelihood that all individuals at the camp had opportunities to be adequately challenged. For example, a longer, more challenging hike was added with increased distance across more rugged terrain, and technology options were increased to challenge savvy tech users in addition to novice, beginner-type activity options. Technology options at camp included social media sessions for beginners as well as separate offerings for experienced social media users.

Speech-language pathologists also can help adults with aphasia to consider specific facilitators in the environment that may help the person to achieve flow, whether it be through ensuring that there is adequate communication support, or identifying quieter times in the day, with fewer distractions, to attempt the activity. The work summarized here also highlighted that some time pressures or deadlines, as well as altering the degree of communication complexity, may be beneficial for supporting individuals with aphasia to achieve flow. Law (1991) suggests gradually increasing the complexity of activities to continue to foster optimal balance of skill and challenge, while guarding against inducing anxiety.

The current work is a start in the process of investigating flow experiences among people with aphasia. In addition to the variables mentioned, there are other aspects that can be investigated more explicitly, including preparation of communication partners to support flow among individuals with aphasia. Lyon et al. (1997) worked with volunteers, and Silverman (2011) worked with friends of those with aphasia to support participation in leisure activities of their choice. As mentioned earlier, it was through the Communication
Partners programming that Lyon et al. (1997) observed that the participants “appeared to temporarily suspend any awareness that they were communicatively disabled” (p. 703).

To summarize, flow experiences are associated with a sense of accomplishment and a feeling of control. There is such a deep immersion that the individual forgets about everything other than the task at hand. Individuals with aphasia have reported such experiences, even to the point of “forgetting what aphasia is.” By considering the balance of skill and challenge in life activities, and the impact that can be made by focusing on the environmental factors that facilitate flow, clinicians may support individuals with aphasia in ongoing reengagement in their lives. Supporting flow experiences can be an explicit goal of providers working with individuals with aphasia.

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