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## Group Singing as a Tool to Bridge Communication Between People with Aphasia and their Caregivers: A Literature Review

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**Group Singing as a Tool to Bridge Communication Between  
People with Aphasia and their Caregivers:  
A Literature Review**

Capstone Thesis

Lesley University

April 26<sup>th</sup>, 2022

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Music Therapy

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### **Abstract**

Aphasia is a devastating language disorder induced by stroke that is typically treated using Speech-Language therapy. Given aphasia's adverse effects on an individual's mental health status, familial structure, relationships, community involvement and general sense of self, the available treatment options should encompass interventions that target all of these areas. Music therapy is a convenient and easily accessible form of treatment for aphasia, ranging in individual and group applications. While the existing literature surrounding aphasia and music therapy is limited, conclusions can be made about its application in treating the aphasic patient as a whole, and not just their speech and language deficits through traditional forms of therapy. Further research focused on involving the outcomes of group singing intervention between caregiver and person with aphasia to observe changes in communication levels is suggested.

*Keywords:* music therapy, group singing, aphasia, stroke patients, communication, caregiver

## Group Singing as a Tool to Bridge Communication Between People with Aphasia and their Caregivers: A Literature Review

### Introduction

Aphasia is a devastating disorder affecting over two million people living in the United States (Santo Pietro et al., 2019). Individuals suffering from aphasia can experience symptoms ranging from the loss of ability to speak, write, understand spoken language, or read (Leonardi et al., 2018). Despite advancements in treatment, many aphasic patients never fully recover (Stahl et al., 2011). Coincident with communication losses, aphasic individuals can develop mental and emotional impairments related to clinical depression (Santo Pietro et al., 2019).

Cerebrovascular incidents (i.e., stroke), traumatic brain injuries (TBI), tumors, or dementia can damage the speech and language parts of the brain leading to aphasia (Leonardi et al., 2018).

Stroke is an abrupt interruption of blood supply to the brain (Rombough, 2006) and is the second leading cause of death in the United States affecting approximately 795,000 people annually (CDC, 2021). Treatments for stroke rehabilitation range from pharmacological approaches, psychosocial treatments, Speech-Language therapies, music therapies, and physical therapies. Speech-Language therapy is the standard of care and subsequently has the most supporting research (Fridriksson & Hillis, 2021). Yet stroke victims cannot be seen in isolation and individuals recovering from a stroke can trigger effects across their entire familial structure. These effects can lead to substantial family and caregiver burdens (Rombough, 2006). Therefore, treatments for aphasic stroke survivors should ideally include not only the patient, but the caregiver and other family members to best support the overall family system.

The positive health and wellbeing benefits associated with group singing are well documented (Camlin et al., 2020). Group singing is ostensibly the most accessible form of music-making and its benefits “can be expressed in terms of both individual and interpersonal effects, underpinned by musical, neurobiological, communicative, and cultural interdependencies” (Camlin et al., 2020). Research is limited on the effect of group singing on individuals suffering from aphasia. For persons with aphasia, group singing increases social engagement, self-confidence, and mood enhancement (Clift et al., 2010). The capacity of music to engage the whole brain may explain that despite the speech and language centers of the brain being found in the left hemisphere, most left-hemispheric stroke survivors with aphasia still retain their ability to sing (Stahl & Kotz, 2014). Indeed, case examples document that even after a left hemispherectomy (removal of the left cerebral hemisphere), individuals can continue to sing (Smith, 1966 p. 470). Group singing offers the potential to more broadly address the individual and caregiver needs of stroke survivors with aphasia than Speech-Language therapy alone.

Stroke rehabilitation and treatment annual total direct and indirect disease costs are roughly \$46 billion in the United States (CDC, 2021). This financial impact warrants high value (i.e., best outcome relative to care cost) therapy approaches should be prioritized. Accordingly, stroke survivors and their families should be offered an array of treatments that best suit their comprehensive needs. While Speech-Language therapeutic intervention is considered the standard, its effectiveness is variable across the wide spectrum of aphasia presentations. Speech-Language practitioners are turning to alternative solutions and suggestions for patients and their families. Stroke and aphasia rehabilitation are not one-size-fits-all. Group singing uses minimal resources, is generally accessible, and can include both patient and caregiver. Communication

abilities for the post-stroke, aphasic individual are variable. Treatment plans are specific to the individual and their presenting abilities or disabilities

Advancing general well-being through group singing can be traced back to ancient times (Judd & Pooley, 2013). Today, group singing is still a popular activity, though participation was affected in recent years due to the COVID-19 pandemic. Regardless, many individuals engage in choral and group singing throughout the modern world, and intentionally using group singing to improve language disorders such as aphasia is growing in popularity (Monroe et al., 2020). Groups of singers must work together to create a musical experience, promoting a sense of belonging, motivation, and purpose (Dingle et al., 2012). That sense of belonging could be instrumental in addressing the identified social isolation linked to higher mortality risk seen among stroke survivors (Boden-Albala et al., 2006). This isolation feature among stroke survivors poses a greater risk than having coronary heart disease thus an intervention mitigating isolation could be expected to positively impact survival outcomes among this population.

In this manuscript, the current research on the use of group singing as a therapeutic intervention among post-stroke aphasia victims is reviewed. Gaps in the available research are identified along with recommendations for future study.

## **Literature Review**

### **Aphasia Overview**

#### **Etiology of Aphasia**

Aphasia is a devastating language disorder that inhibits an individual's ability to verbally communicate or interpret spoken or written communication. Roughly two million people suffer from some form of aphasia in the United States of America (Santo Pietro et al., 2019). Aphasia

affects a wide population, but most individuals are >50 years (Santo Pietro et al., 2019). Stroke, a traumatic-brain injury, tumor, dementia, or other neurological disorder can lead to aphasia (Santo Pietro et al., 2019). Essentially, any damage to the regions in the brain responsible for speech and language production can cause aphasia (Leonardi et al., 2018). Aphasia can manifest with diverse severity and presentations. “Variation in the severity of expressive impairments, for example, may range from the individual experiencing occasional word-finding difficulties to having no effective means of verbal communication” (Brady et al., 2016). Santo Pietro et al. highlights the diversity of presentations as rooted in the biology of the brain injury stating in *When Words Fail: Providing Effective Psychological Treatment for Depression in Persons with Aphasia*:

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. (p. 2)

The uniqueness of brain injury and disease manifestation among post-stroke patients with aphasia must be considered when clinicians are devising treatment or rehabilitation plans.

There are two main categories of aphasia: Fluent or non-fluent. Within the fluent and non-fluent groupings, there are additional ways to categorize the language disorder based on presenting symptoms. The type of aphasia an individual acquires depends on where the injury has occurred in the brain. Individuals with fluent, or expressive aphasia usually have poor comprehension skills but can speak in full, incoherent sentences due to damage in their temporal lobe. This is the most common form of aphasia and is also known as Wernicke’s aphasia, given its damage to the Wernicke area located in the left side brain (Santo Pietro et al., 2019). The

Wernicke area is responsible for speech production and interpretation. Non-fluent aphasia stems from injury to a different location in the brain. Most often this is Broca's area, which is a small region in the brain controlling motor speech. Persons with non-fluent aphasia can usually read, understand the speech of others, may be able to write, but specifically struggle with producing verbal output (Santo Pietro et al., 2019).

In his popular collection of neurologic and psychological case studies, Oliver Sacks writes, "The scientific study of the relationship between brain and mind began in 1861, when Broca, in France, found that specific difficulties in the expressive use of speech, aphasia, consistently followed damage to a particular portion of the left hemisphere of the brain" (Sacks, 1970, p. 3). Broca's discovery was pivotal as it linked a cognitive function with a specific part of the brain. For the stroke survivor, there is a 25 - 40% chance that the individual will develop aphasia (American Speech-Language-Hearing Association, 2022) and among these, 50% will have aphasia accompanied by a long-term disability (Jung et al., 2012). Understanding the etiology of aphasia's presentation has implications to targeting rehabilitation.

### **Aphasia and the Community**

Successful communication is fundamental for community participation. Tamplin et al. (2013) proposed that, "Effective communication is often the basis for establishing and maintaining relationships and for participating socially in many leisure activities" (p. 929). The loss of communication skills can result in aphasic individuals feeling trapped resulting in a number of accompanying adverse effects. Le Dorze and Brassard's qualitative research (1995) examines the consequences of aphasia on the victim's family members and surrounding community. Nine participants with a variety of presenting forms of aphasia (both fluent and non-fluent) along with their family members (four spouses, one cousin, one mother, one friend,



one child, and one niece) were included in the study. The participants were individually interviewed about their experiences with aphasia including the changes in intrapersonal relationships, careers, and overall communication. Their findings demonstrated aphasic individuals report fatigue in trying to keep up conversations, irritation with self in not timely finding the right words, and frustration when others speak on their behalf. On the opposite end of the relationship, community members may also experience discomforting feelings or embarrassment when attempting to communicate with a person with whom they once had ordinary verbal interactions. This only further promotes a sense of isolation among patients living with aphasia driving reclusion and emotional compression (Dingle et al., 2012). People in the community can shy away from moments of uncomfortable interaction or simply not want to further embarrass their community members with aphasia, and can inadvertently further promote this isolation.

Patients living with aphasia may also experience social discrimination based on their perceived mental abilities. Members of the aphasia community are frequently mistaken for also experiencing a lower level of cognitive function, but this may not be the patients' lived reality. This misinterpretation can invoke feelings of embarrassment, frustration, ostracization, demoralization, and inferiority. Ironically, individuals with aphasia also note the potential for people to interpret them as being drunk or dealing with alcoholism (Le Dorze & Brassard, 1995).

In a 2018 qualitative study aimed at increasing research around group singing for persons with aphasia and their caregivers, the authors note that, "socially-focused programs can promote empowerment by helping participants prepare for life with aphasia on a long-term basis" (Mantie-Kozlowki et al., 2018). This would suggest the empowerment would go beyond simply existing within the confinements of a patient's place of living or sheltered, potentially mundane,

routine. Persons living with aphasia must receive support from the community around them while still living with aphasia.

### **Aphasia, Caregiving, and the Family System**

For patients, their caregivers, and family members, aphasia can damage interpersonal relationships and the overall health of the family structure. Family members and caregivers of those living with aphasia must practice patience, active listening, affirmation and use hand gestures to best communicate with the impaired individual. Le Dorze and Brassard (1995) note the potential for disturbances in familial relations, frictions with a spouse, anxiety in meeting strangers, loss of friends, or loss of abilities to make social connections for those living with aphasia (p. 246). The spouse of an individual with aphasia plays a major role in their rehabilitation and quality of life following the diagnosis of the disorder (Croteau & Le Dorze, 2006). A 2006 study by Rombough et al. found that the spouse does the majority of the caregiving for a person with aphasia (p. 200).

A 2018 study by Mantie-Kozlowski et al. examined enjoyment levels in recreational group singing with aphasic patients and their caregivers focusing on the emotional, psychological, and even physical weight caregivers' experiences. "Overall, caregivers felt their responsibilities as a caregiver of someone with aphasia resulted in decreased time for self-enjoyment, a lack of ability to build relationship with the PwA (Person with Aphasia) through mutual activities, and increased stress or burden related to time consumption, traveling, and expenses for the PwA" (Mantie-Kozlowski et al., 2018, p. 533). This suggests that activities providing low-cost, easily accessible, and enjoyable opportunities to build relationships with the patient, would be an appealing opportunity to caregivers of people living with aphasia. Tamplin et al. (2013) writes, "Providing opportunities for both the families as well as the stroke survivors to receive support is

therefore critical to enhancing the well-being of each" (p. 930). This implies that support must be provided to the overall structure of the family system in order to best help the individual living with the condition.

On the contrary, the caregiver/patient relationship has the potential for psychological turmoil and further strain. A 2010 study by Gillespie from *Aphasiology* examined living with aphasia from both the patient and caregiver perspectives. Gillespie et al. (2010) concludes,

Providing support that is enabling in a practical sense can, paradoxically, position the recipient as disabled. This peculiar logic ensnares both caregivers and care-receivers. PwA are caught between receiving help and not wanting to appear dependent while caregivers are caught between wanting to protect their partner with aphasia, but also wanting to encourage independence. Moreover, caregivers are also constrained by their understanding of their partner's dilemma. (p. 1573)

In other words, support from caregivers can potentially psychologically harm individuals with aphasia. Additionally, the reality of ineffective communication between these two perspectives could heighten and accelerate this conundrum. Offering an intervention, such as group singing, has potential to bridge this gap of unproductive communication by providing opportunity to express emotion or experience in a creative and therapeutic space.

### **Aphasia, Caregiving and Communication**

As noted earlier, communicating with a PwA and their caregiver(s) takes patience, practice, and trust. Many rehabilitation programs offer both initial and ongoing support for both the aphasiac individual and the caregiver. Santo Pietro et al. (2019) supported conversation of a training program that is solely directed at the non-aphasic caregiver or partner:

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. (Santo Pietro et al., 2019)

Supporting the caregiver ultimately supports the aphasic individual.

Spouses or family members may find themselves working to overprotect the PwA from further social stigmatization by speaking for the person to reduce potential shame or discomfort in communication attempts. In *Overprotection, "speaking for", and conversational participation: A study of couples with aphasia* (Croteau & LeDorze, 2006), authors write, "If the spouse provides a great deal of assistance to the person with aphasia, the spouse may assist excessively in conversation and thus "speak for" the aphasic person. "Speaking for" the person with aphasia is likely to reduce her/his participation in conversation" (Croteau & Le Dorze, 2006). This overprotectiveness can further trouble the patient/caregiver relationship as the person living with aphasia may experience embarrassment and frustration. Providing a medium for both the person with aphasia and the caregiver to convey these feelings of discouragement in an easily accessible modality, such as singing, would encourage the mental, emotional and physical health of both individuals.

### **Aphasia and Mental Health**

Aphasia is associated with high levels of clinical depression. Nevertheless, aphasic individuals rarely receive mental health intervention. Per Santo Pietro et al. (2019), "...much remains unclear about the etiology of depressed mood in this population". This may be due to the difficulty in assessing the mental health status of individuals who are unable to explain their condition to clinicians (Santo Pietro et al., 2019). This is a concerning truth for both researchers, clinicians, caregivers, and aphasic people as the onset of a disorder like aphasia is virtually guaranteed to have mental health consequences. Santo Pietro does add, however, that evidence-based treatments (such as cognitive-behavioral interventions) do hold promise. "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" (Santo Pietro et al., 2019). Cruice et al. (2010) echo this sentiment stating:

Research is needed to understand why such a substantial number had high levels of depressive mood, and how mood and emotional and mental health related quality of life can be improved. This finding is particularly concerning given that most adults (average 41 months post-stroke) were no longer in regular contact with speech pathology or stroke healthcare services. At minimum, services across the continuum of care need to routinely include screening for depression after stroke, particularly beyond the 12 months post-stroke time frame. (p. 185)

Routine depression screenings should be provided in every aphasic individual's treatment plan. Similarly, mental health counseling should be extended to the caregivers and family.

The mental health of a stroke survivor is easily compromised. Though a person may feel grateful for their life after surviving a stroke, life afterward presents unfamiliar and seemingly

impossible challenges, like walking or talking. Santo Pietro adds, “The obstacles to interpersonal verbal interaction that aphasia presents are likely contributors to reduced loss of life engagement and development of depressed mood” (Santo Pietro et al., 2019). In other words, the loss of once-enjoyed activities, as well as personal agency or a sense of dignity can take a devastating mental toll on the aphasic patient. Furthermore, the inability to participate in social relationships can worsen symptoms of depression, social anxiety, or even suicidal ideation.

Because of this sudden and unprecedented change in a person’s life, caregivers and medical team members must be hyper-aware of the mental health challenges that may soon follow an initial survival of stroke. “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” (Santo Pietro et al., 2019). Considering the unpredictable nature of having a stroke, many survivors and their family members are mentally, emotionally, and spiritually unprepared for the sudden impact on daily life (Rombough et al., 2006). This unforeseen change can leave family members feeling fearful, anxious, panicked, or pressured to constantly care for the survivor.

## **Treating Aphasia**

### **Speech & Language Rehabilitation**

The standard of treatment for individuals with aphasia is Speech-Language therapy. This treatment includes “a range of areas, including speech production, fluency, language, cognition, voice, resonance, and hearing” (Boster et al., 2020). In *Current approaches to the treatment of post-stroke aphasia*, Fridriksson and Hillis note that, “by far, the most common approach to aphasia rehabilitation is behavioral speech and language therapy” (Fridriksson & Hillis, 2021). While this therapy can vary depending on the severity of the presenting aphasia, the end goals of

treatment are similar. “The primary aim of speech and language therapy in aphasia management and rehabilitation is to maximize individuals’ language and communication abilities, activity, and participation” (Brady et al., 2016). Speech and language therapists’ central goal is to augment communication capabilities. Fridriksson and Hillis add, “The goal is to improve language functions with the assumptions that doing so will generalize to communication abilities and, by extension, communicative quality of life” (p. 184). In other words, Speech-Language therapists commit to treating communication, theorizing that this will ultimately treat the whole person.

Unfortunately, because of this condition’s unique presentation, Speech-Language therapy does not always prove to be effective. According to Yamaguchi et al., “most patients with aphasia undergo speech therapy in the subacute to chronic phases; patients with large left-hemispheric lesions that result in severe nonfluent aphasia typically do not show good natural recovery and do not appear to be very responsive to traditional speech therapy” (p. 78). This has left Speech-Language pathologists and aphasia researchers to turn to alternative methods of treatment.

### **Holistic Treatment Approaches to Aphasia**

The available literature surrounding holistic approaches to treating aphasia is lacking. Mantie-Kozlowski et al. (2018) suggests that while traditional approaches to aphasia are valuable, they fall short of stimulating holistic healing, “social model advocates have argued that the therapeutic recovery of verbal expression central to traditional approaches to aphasia care, while important, fails to account for the centrality of sociality to overall health and well-being” (p. 519).

There is, however, available research treating aphasia with acupuncture alongside traditional Speech-Language therapy. Jung et al. (2012) compared two cohorts living with aphasia — one with only Speech-Language therapy (only language therapy, OLT) and the other with both Speech-Language therapy and oriental medicine consisting of herbal medicine, acupuncture, and moxibustion (combined oriental therapy, CLT). The study concluded that, “among patients with severe aphasia at onset, those in the COT group exhibited better improvements than those in the OLT group, suggesting that the co-administration of oriental medicine therapy with language therapy revealed more effective tendency in the treatment of patients with severe aphasia” (p. 6). This further supports the idea that there should be a multi-therapeutic approach to treating aphasia.

### **Aphasia and Music Therapy**

The clinical practice of music therapy offers an array of theories, treatments, approaches, and methods in the rehabilitation of aphasia. Most popular among these being Melodic Intonation Therapy in the specific rehabilitation of speech and language disorders like aphasia. However, other genres within the practice of music therapy could potentially ameliorate communication in a person living with aphasia. Boster et al. (2020) concludes that, “The context of music may be particularly beneficial for individuals with communication disorders who are actively working to develop or regain skills” (p. 22). Community music therapy, songwriting, choral singing, and group singing all use music in a variety of contexts and methods to support the overall wellbeing and health of patients.

A study in Italy by Raglio et al. (2015) sought out the results of combining the intervention of Speech-Language therapy with music therapy in the treatment of aphasia. Findings concluded that changes in communication, mental health wellness, or overall quality of life hardly



improved with Speech-Language therapy alone. Results showed significant improvement only when music therapy was collaborated with Speech-Language therapy to create a duo therapeutic intervention approach. This further promotes the sentiment that music therapy services and intervention should be standard in an aphasic patient's treatment plan.

Additionally, music therapy can help patients living with aphasia, regardless of how the disorder manifests. A Japanese case study by Yamaguchi et al. (2012) found success in using music therapy with a severely aphasic individual noting,

In our patient, long-term singing practice and melodic intonation therapy practice had effects on the remaining function in the left upper temporal area involved in music semantic memory and allowed the patient to utter words using the music lexicon. The above results suggest that music therapy can access and activate the remaining function in a patient with chronic severe aphasia who cannot be treated with normal speech therapy. (p. 80)

This finding shows that even on the extreme end of the aphasic spectrum, music therapy can still invoke success and progress in the patient. This is an encouraging and hopeful discovery in the field of aphasic rehabilitation and should be further supported with added research.

In comparison to other expressive art therapy modalities (i.e. drama therapy, art therapy, bibliotherapy, dance/movement therapy, etc.) music therapy services are the easiest to access and use with patients of varying disorders or limitations. Boster et al. notes, "While there are multiple methods for engaging in a range of arts-based interventions, individuals with physical or cognitive disabilities may have greater access to music in comparison to other art forms" (p. 20). Music therapy can be as simple as the patient passively listening or fully engaging in playing

instruments and singing. For the aphasic patient, the spectrum of music therapy services can be accessed in a multitude of ways.

### **Melodic Intonation Therapy**

Melodic Intonation Therapy (MIT) can be offered to qualifying candidates from trained music therapists. In *Melodic Intonation Therapy for Aphasia* (Albert et al., 1973), the author explains, “Melodic intonation therapy involves embedding short phrases and sentences in a simple, non-linguistically loaded melody pattern” (p. 130). With this training, patients can psychologically heal and the therapist offers a sense of control and familiarity to the client to access their new reality. Additionally, a physiological element is added as well, relative to non-intonation based speech therapies, MIT contains two unique components: (1) melodic intonation (singing), and; (2) rhythmic tapping syllables (using the patient's left hand) while phrases are intoned and repeated ( Schlaug et al., 2010). Patients can engage both the musical and the physical actions of singing and tapping during a music therapy session using MIT. Patients who have suffered from left-hemispheric neural damage are the best candidates for MIT as their only chance of recovery is through recruitment of right-hemispheric stimulation (Schlaug et al., 2010).

While it has been determined that most aphasic individuals are still able to sing, research has also pointed to the potential benefit of rhythmic intervention rather than melodic. In *Facing the music*, Stahl and Kotz conclude that singing may not be as useful as hoped in terms of improving communication levels of aphasic people. Instead of taking advantage of right-hemispheric ability and “overriding” the Broca or Wernicke areas of the brain through singing, Stahl and Kotz suggest the rhythmic piece inherent to singing may hold the key to communicatory improvement (Stahl & Kotz, 2014). While this objection to MIT may be true, it fails to

recognize singing's capacity to induce overall wellness, rather than simply focusing on one symptom of an aphasic person's diagnosis.

### **Group Singing**

Singing is the most popular musical activity that is enjoyed across all cultures (Davidson & Faulkner, 2010). Subsequently, group singing is expanding in recognition as a possible intervention for individuals struggling with language and social communication or even cognitive impairments from brain trauma (Monroe et al., 2020). Singalong groups can vary in attendance, set-up, or song repertoire and can have long-lasting social, physical or spiritual effects. Mantie-Kozlowski et al. (2018) points out that, "singalong groups that include participants with aphasia, regardless of vocal skill, are a way of offering beneficial programming that can be sustainable long after direct intervention has been discontinued" (p. 520). In other words, despite an individual having little to no musical background, singing groups remain a viable option for participation and success that have continuing effects post-intervention.

Group singing can also be utilized in a mental health capacity. Authors Jennifer Bibbs and Katrina Skewes McFerran have coined the term, "musical recovery" in using group singing in mental health counseling. Bibbs and McFerran (2018) conducted a qualitative study in which participants were encouraged to use the group singing experience as "coping resources to regain musical, emotional and social health" (p. 6). The study also concluded that, "group singing was described as helpful in promoting a new, healthy relationship with music, which was shaped by experiences shared in the group" (Bibbs & McFerran, 2018).

Regardless of group singing's healing capabilities, Davidson and Faulkner (2010) highlight the commonality singing can offer individuals as well stating,

Whilst a specialist music therapy profession exists, which deals with the use of music as a specialist treatment for specific therapeutic goals, music can be realized in many diverse more ordinary settings where it becomes a vehicle for positive personal, cultural and communal expression, and thus has potential benefits to health and well-being. The most commonplace music activity enjoyed across all cultures is singing. (p. 165)

This is an important distinction to note as aphasic individuals may frequently feel less like the pre-aphasia version of themselves and would benefit from primitive stimulation to encourage connection to their inherent humanness. Tamplin et al. (2013) notes the potential singing holds for personal inspiration adding, “Singing together seems to have an equalizing effect; it can inspire confidence and reduce isolation” (p. 931). This unique and innate quality that group singing holds should be capitalized in the therapeutic space.

Furthermore, Monroe et al. (2020) point out that only eleven studies have specifically inspected the effects of group singing on communicatory levels with people living with Parkinson's disease, post-stroke aphasia, or dementia noting, “Given the potential for group singing to stimulate access to words and phrases of language as well as the rhythmic and melodic structure of spoken language, further study of this population and potential effects on their language skills is warranted” (p. 316). In other words, the promise of connection of spoken language to rhythmic and melodic phrases in song within the modality of group singing should be encouraged in further research and study.

### **Therapeutic Songwriting**

As many aphasic individuals struggle with finding the right words, therapeutic songwriting could potentially act as a valuable form of music therapy in aphasic care. While research in this area of music therapy is lacking, parallels can be made between patients with aphasia and

patients living with dementia. Stroke has the potential to induce dementia and research in songwriting intervention has shown progress in improving memory in dementia patients. “The songwriting activities intending to improve the power of memory in this study have the subjects fill in blank lyrics from memory. The subjects were encouraged to express situations in the past related to the lyrics with movements. Most of the subjects actively participated in expressing their past memory while singing and making movements and showed a great interest in the activities” (Hong & Choi, 2011). Likewise, the average aphasic adult may be drawn to musical lyrics and related memories or spiritual connections. Therapeutic songwriting may offer these patients a chance to express their ideas, thoughts, or wishes to loved ones or caregivers (Boster et al., 2020). Therapeutic songwriting may additionally offer the caregiver/patient duo opportunities to create songs centered around activities of daily living like going to the bathroom, eating, or bathing.

Additionally, research has pointed to the connection between memory and vocal music. A 2020 Finnish study (Sihvonen et al., 2020) examined this connection comparing verbal memory levels between aphasic individuals who had listened to audiobooks or instrumental music versus aphasic individuals who listened to vocal music. Results found that listening to vocal music stimulated language recovery better than the audiobooks or instrumental music. This relationship between vocal music and memory could help propel further research relating to aphasia and music.

### **Community Choral Engagement**

For the aphasic stroke survivor, any form of social activity or opportunity to communicate can come as a relief. Choral engagement fulfills many categories of general physical, emotional, social, and even spiritual wellness. Like group singing, community choral groups can provide

opportunities for quality-of-life improvement, increase socialization, improve physical functioning, lower heart rates, and anxieties as well as help individuals to feel as though they are needed, honored, and respected as being a part of something larger than themselves (Dingle et al., 2012).

Choral groups slightly differ from group singing or singalong groups as there is a product component to the activity of the group, usually ending with a concert or some type of performance. Performances can range in presentation but can offer an opportunity for community awareness of aphasia or even the act of singing in of itself. Judd and Pooley note that, “however, in order for this (singing) to be viable there needs to be more awareness of the benefits of singing within the general public and more acceptance of the activity” (p. 281). Community choral groups have the exceptional opportunity to not only engage their participants in therapeutic musicking but educating the public simultaneously. For context, the expressed goal of The Aphasic Choir of Vermont’s leadership is to have fun, exercise participants' brains, and educate the public about aphasia. This includes an annual concert where members of the community are invited to watch individuals with wide ranges of aphasic abilities sing group-selected songs, demonstrating how to best interact or communicate with an aphasic person, and collaborate with their caregivers.

With most individuals with aphasia being over 55 years old, this creates an opportunity for friendships and connections between individuals within the same stage of life. Tamplin et al. finds, “the social experience of singing in a choir provides opportunities to meet and participate with like-minded people in a meaningful shared experience” (p. 931). In conclusion, the experience of choral engagement not only provides the aphasic person an opportunity to use their compromised voice, but stimulates positive social, psychosocial, and physical wellness as well.

## **Caregivers and Rehabilitation in Music Therapy**

The research is relatively clear in that group singing does aid both the patient with aphasia and the caregiver and each could benefit from music's socio-emotional, cognitive, and physical stimulation (Davidson & Faulkner, 2010). Not only this, but singing is a gratifying activity for many people—aphasic or not. Mantie-Kozlowki et al. (2018) finds that, “caregivers expressed that the sing-along sessions provided opportunities for rewarding interactions in an enjoyable activity” (p. 533). In other words, group singing, or choral engagement is an activity that can not only stimulate communication but is an enjoyable experience for both patient and caregiver. This study also adds that “the physical and psychosocial benefits of group singing may be particularly helpful for those who unexpectedly find themselves in a caregiver role” (p. 523). Singing could aid in the transition from spouse, child, friend, etc. to caregiver in a unique and enjoyable manner.

For the aphasic individual, group singing offers chances to socially interact with their caregiver. Tamplin et al. (2013) notes that, “participants in the choir experienced opportunities to reconnect with family and community, and develop self-confidence and social skills to facilitate increased independence” (p. 938). This benefits the patient and caregiver psychologically, as if the two are connected in a symbiotic relationship. Singing in a group among aphasic individuals and their caregivers could also provide a chance for caregivers to connect, seek advice, or experience camaraderie in their given situation.

## **Discussion**

Throughout this thesis, academic literature connections between group singing, aphasia, and communications were examined. Based on the available research discussed throughout the literature review, conclusions can be made regarding the gaps within the existing literature

pertaining to this topic. While the use of group singing as a tool to increase communication levels in the aphasic patient is gaining recognition in the medical and post-stroke rehabilitation community, research is fairly limited as many studies have not been systematically reviewed (Monroe et al., 2020). Further research involving the specific outcomes of group singing stimuli between caregiver and person with aphasia to observe changes to communication levels, habits, or struggles is necessary to propel this therapeutic method forward.

A notable finding throughout the research was the overwhelming impact of aphasia on the person as a whole and not solely on their ability to verbally communicate (Fridriksson & Hillis, 2021). This was echoed in the majority of studies on aphasia. Aphasia's massive effects on the familial structure (Rombough, 2006), community involvement (Le Dorze & Brassard, 1995), and relationships (Croteau & Le Dorze, 2006) was also a prominent discovery throughout the literature. This leads to the bold conclusion that aphasic treatment must include not just the individual, but their entire familial system and their caregiver (Tamplin et al., 2013). The literature frequently pointed to the challenging and stressful role the caregiver plays in the aphasic individual's life and how strenuous that can be in a romantic relationship, a parent/child relationship, or a friendship (Le Dorze & Brassard, 1995). This subsequently takes a massive toll on an aphasic person's mental health (Santo Pietro et al., 2019). This suggests that caregivers should receive additional mental health or relational support in caring for an aphasic individual (Santo Pietro et al., 2019). Aphasia treatment should consider the whole person, and not just their speech and language deficits.

Group singing can be harnessed as a medium for communication (Monroe et al., 2020), connection (Tamplin et al., 2013), and mental wellness (Bibbs & McFerran, 2018) for individuals and their caregivers or family members suffering from aphasia. This sentiment was



mirrored in the available literature. Whether this experience take place in an informal group singing setting, or an official choir, singing together can encourage healing for both patient and caregiver and can provide a space to explore the multitude of stressors or changes that accompanies a diagnosis of aphasia (Tamplin et al., 2013). Furthermore, singing is an enjoyable and easily approachable musical activity that is practiced across all cultures (Davidson & Faulkner, 2010) and that can allow for self-expression, personal inspiration, self-awareness, spiritual connection, and physical relaxation (Dingle et al., 2012).

### **Study Limitations**

The existing literature regarding aphasia and music therapy interventions is limited, but shows positive results. Due to the limitations in research and data surrounding this population and diagnosis, definitive conclusions cannot be made. Additionally, because this thesis is a literature review, perspective is restricted within the confines of the pre-existing literature and the subsequent research and data that was collected and discussed. Furthermore, there was insufficient opportunity for new research to be conducted because of the ongoing COVID-19 pandemic at the time this thesis was written. Because of disease control measures such as social distancing, it was extremely challenging for a variety of groups to meet for regularly scheduled activities. Musical groups, such as choirs, were no exception, and arguably had an even more challenging experience due to the inherent nature of singing and the technological limitations to applications such as Zoom or Google Meet. This added to the difficulty in finding literature on aphasia and group singing to consider for this thesis.

### **Further Recommendations**

This leads to the idea that the greatest form of music therapy intervention for the aphasic person would be a group singing setting that still targets speech and language practice, but

ultimately supports the whole person and their caregiver. Based on these findings, any version of group singing—choral engagement or not—is recommended for further research in collaboration with the aphasic population.

### **Conclusions**

In the modern Western world, many are familiar with the famous Hans Christian Anderson quote, “Where words fail, music speaks” (Anderson et al., 1866, p. 39) —perhaps as the saying on the front of a greeting card, a tattoo across a person’s arm, or maybe on a plaque one could buy at a local craft shop. The quote poignantly highlights music’s innate ability to transcend spoken word and strike right at the heart of any given emotion. For the aphasiac individual, words do fail. But perhaps Christian Anderson was not only referring to the emotional aspects of music’s capabilities? Maybe, he was alluding to something entirely more literal.

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<https://doi.org/10.1080/02687038.2016.1227424>

***THESIS APPROVAL FORM***  
**Lesley University**  
**Graduate School of Arts & Social Sciences**  
**Expressive Therapies Division**  
**Master of Arts in Clinical Mental Health Counseling: Music Therapy**

**Student's Name:** Allison Whiteside Pollard

**Type of Project:** Thesis

**Title:** Group Singing as a Tool to Bridge Communication Between People with Aphasia and their Caregivers: A Literature Review

**Date of Graduation:** *May 21<sup>st</sup> 2022*

In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

**Thesis Advisor:** *Dr. Rebecca Zarate*