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Revealing the impact of singing in an aphasia group

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Revealing the Impact of Singing in an Aphasia Group:

"I've noticed that... our using our... language is been really good for us today to... song...

it has really helped us with that" -Aphasia Book Club participant

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An Honors Capstone Project Presented to

the Faculty of the Undergraduate

College of Health and Behavioral Sciences

Department of Communication Sciences and Disorders

James Madison University

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by Ava Louise Barton

May 2020

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Acknowledgements

Abstract

Aphasia is an acquired, neurogenic language disorder that affects an individual's ability to express and comprehend language to varying degrees. Individuals with aphasia are restricted in their ability to communicate effectively and as a result, experience decreased quality of life and marked psychosocial consequences. There are numerous interventions that target the language symptoms associated with aphasia. However, social groups, such as book clubs, address both the language and psychological needs of individuals with aphasia. This project explored spontaneous moments of singing that occurred within an aphasia book club. Twenty-four moments of singing were identified and analyzed from six previously recorded group sessions using a qualitative research methodology. All of the moments of singing revealed the competence of the group, or members' inherent ability to participate and contribute to the group. Two subthemes were identified in that singing also revealed participants' linguistic competence, their ability to produce language, and their interactional competence, or strong affiliation and group membership. This preliminary study suggests that singing can be used as a tool for people with aphasia to demonstrate their inherent competence and offers support for why music groups for people with aphasia are successful.

Literature Review

Aphasia

According to the American Speech and Hearing Association, aphasia is an acquired, neurogenic language disorder that affects an individual's expressive language and comprehension skills. Aphasia is most often caused by stroke that impacts the language areas of the brain. According to the National Aphasia Association, approximately one-third of strokes, or 225,000 strokes per year, result in aphasia (NAA). Aphasia's impact on an individual goes far beyond a loss of language; in many cases, it affects all areas of an individual's life. People with aphasia (PWA) are restricted in their ability to communicate effectively and as a result, experience decreased quality of life and marked psychosocial consequences (Le Dorze & Brassard, 1993). Aphasia develops in an instant but requires extensive support to manage.

Impact of Aphasia

Psychological difficulties associated with an aphasia diagnosis include depression, social isolation, and lowered self-esteem (Sarno, 1997). This negative psychosocial impact is also associated with ableism. Ableism in regards to aphasia refers to the way that our society, "falsely treats impairments as inherently and naturally horrible and blames the impairments themselves for the problems experienced by the people who have them" (Nario-Redmond, 2020). While the negative psychological state occurs following the onset of aphasia, aspects of this, such as social isolation, may be caused in part by the lack of access to social opportunities due to reduced participation in social situations, such as family gatherings or other preferred activities, following the onset of aphasia (Kagan, 1998). This lack of access is caused by both the language difficulties associated with aphasia, and also the lack of awareness and acceptance of speech and language differences in adults. It is clear that the difficulties associated with aphasia are a

combination of social constructs and the language difficulties caused by aphasia.

 Social isolation leads to a number of personal difficulties such as alienation, hopelessness, dependency, and negative psychological state (Parr, 2007). This negative psychological state is damaging to the quality of life for individuals with aphasia, but may be alleviated with the use of effective coping strategies and educating others about how to support conversation with PWA. Brown, Worrall, Davidson, and Howe (2011) identified qualities of successful living with aphasia. These qualities were determined by reviewing data from three separate research studies in a meta-analysis. This analysis revealed that living successfully with aphasia is characterized by meaningful connections, joyful interaction and autonomy. While living successfully with aphasia is possible, there is a process to achieve successful living.

A primary challenge to living successfully with aphasia is difficulty associated with renegotiation of identity (Hutchinson, Roberts & Daly, 2017; Shadden, 2005). Shadden (2005) describes aphasia as identity theft. Aphasia robs the person of their previous identity because it impacts their sense of self due to difficulty communicating. Identity has been defined as, "all of our actions and reactions" (Shadden, 2005). Identity involves human interaction, contribution to society, and meaningful dialogue. The process of renegotiation of identity spans the personal realms of career, family, and social roles.

An aspect of identity that is impacted by aphasia is competence. PWA are often viewed as incompetent by their peers, employers, and others who they interact with in day-to-day activities. Adults are expected to speak coherently and fluidly with little effort in conversation. As competent communicators, individuals are expected to seamlessly call upon linguistic and paralinguistic knowledge to communicate effectively and efficiently (Kovarsky, Duchan, & Maxwell, 1999). This expectation to be able to communicate effectively and efficiently is driven

by ableism, and the general understanding of what it means to communicate competently as an adult speaker. There is a lack of acceptance and understanding in the current society for differences in speech in language. The onset of aphasia disrupts these processes and therefore PWA are often viewed as incompetent. In reality, PWA are inherently competent, but need the appropriate tools and "the right interactional circumstances" to demonstrate their competence (Kovarsky et al., 1999, p. 291).

Identity and competence are concepts that are intertwined. In order to feel confident and capable to fulfill the various roles that create a sense of identity, the individual with aphasia needs to feel competent. One way to foster a sense of competence is to provide the appropriate tools and circumstances to PWA. Furthermore, PWA have to establish new positive identities and new roles after onset of aphasia. A combination of the right supports to reveal competence, and create new positive roles after to onset of aphasia can help provide a fulfilling lifestyle to PWA in their new identity. Current aphasia treatment practices have shifted to approach treatment in a way that supports PWA returning to their various roles.

LPAA and Treatment

One of these treatment practices is the Life Participation Approach to Aphasia (LPAA) (Chapey, Duchan, Elman, Garcia, Kagan, Lyon, & Simmons-Mackie, 2000) model, which considers PWA more holistically and modifies treatment to facilitate participation in desired life activities. The LPAA model focuses on clients' needs to re-enter their life successfully after re-defining themselves following the onset of aphasia. In this model, the clinician is not the expert, but a team member who helps develop a management plan that embraces, acknowledges, and supports the client in their process to manage aphasia and live successfully. There are a variety of social treatments for aphasia that align with the LPAA philosophy.

Conversation groups and book clubs for persons with aphasia are consistent with the LPAA model's focus on quality of life and alleviation of psychological difficulties. Conversation groups, or social groups for individuals with aphasia are groups facilitated by a Speech Language Pathologist and consist of 5-10 adults with aphasia (Elman & Bernstein-Ellis, 1999). Rather than focusing on impairment or teaching strategies to communicate effectively, socially oriented conversation groups are concentrated on providing a space for social communication for people with aphasia (Lee & Azios, 2019). These groups allow participants to meaningfully engage and become part of a community, which assists with renegotiation of identity and decreases psychosocial difficulties that an aphasia diagnosis produces (Elman, 2007; Simmons-Mackie & Elman 2010). Furthermore, conversation groups are a space in which PWA are assumed to be competent (Simmons-Mackie & Elman, 2015). Often, conversation groups can assist in facilitating meaningful relationships amongst participants, provide a space that allows participants to demonstrate competence, and present a positive community. The use of conversation groups has allowed for management of language difficulties and psychological difficulties to be addressed together (Elman & Bernstein Ellis,1999).

Aims

This project explored moments of singing that occurred in an aphasia book club. Singing is an established intervention in aphasia to promote fluent production. A treatment that capitalizes on an individual's ability to sing is Melodic Intonation Therapy (MIT). MIT focuses on eliciting song from individuals with aphasia to regain the natural prosody, or songlike pattern, of conversational speech. This treatment approach is used to facilitate production of single words and everyday phrases to support communication for individuals with non-fluent aphasia (Norton, Zipse, Marchina & Schlaug, 2009). In the book club that was the focus of this project,

participants were never instructed to sing as a means of producing fluent output. Therefore,

moments in which singing occurred spontaneously were of particular interest. These moments

were striking because they appeared to be reflective of positive affiliation among members and

increased participation in the group. This project explored those moments to understand what

happened before, after, and during moments of spontaneous singing.

Methods

This project explored moments of singing that occurred within an aphasia book club using a qualitive research methodology. Ethnography practices are commonly accepted as a form of qualitative research in aphasia. These studies allow researchers to explore a broad idea and narrow in on a specific behavior (Simmons-Mackie & Damico, 2010). Ethnographic microanalysis practices aim to explore and understand the face-to-face interactions, the cultural contexts of interactions, and how people construct their interactions (Hyland & Paltridge, 2013, p. 91). This form of analysis combines ideology from traditional ethnography, interactional sociolinguistic analysis, and context analysis to look at a distinct phenomenon observed. Ethnographic microanalysis form of analysis has been used successfully to explore phenomena in aphasia rehabilitation. For example, Azios, Archer, and Moody (2019) used ethnographic microanalysis in a qualitative study examining humor in clinician-client interactions. Azios et al. (2019) approached their analysis by having the videos transcribed, and then examined the interactional sequences involving laughter that occurred in therapy to determine the role of laughter. Data analysis for this project followed procedures consistent with ethnographic microanalysis where moments were examined in an iterative process (Agar, 1986).

Setting and Participants

Data for this project came from an aphasia book club offered through the JMU Aphasia Research and Treatment Lab (IRB Approved Protocol 17-0254 "Promoting Communication and Quality of Life in Individuals with Aphasia"). The aphasia book club took place in Fall 2018 and spanned eight weeks. The group was facilitated by an experienced speech language pathologist (Dr. Lee) and a first-year graduate student in the speech language pathology program. The book club was open to individuals with aphasia in the Shenandoah Valley area. The participants varied

in age, gender, and severity of aphasia. The group consisted of four participants; two with moderate-severe non-fluent aphasia and apraxia of speech, one participant with moderate non-fluent aphasia, and one participant with mild anomic aphasia.

Table 1. Participant Demographics

Initials	Gender	Age (years)	Type	Severity	Months Post-onset	Associated Diagnoses
SE	Female	79	Non-Fluent	Moderate	15	N/A
DR	Female	72	Fluent	Mild	9	N/A
JA	Male	67	Non-Fluent	Moderate - Severe	38	Apraxia
WM	Male	56	Non-Fluent	Moderate-Severe	16	Apraxia

Data Collection and Analysis

Video from the first six weeks of an eight-week book club were reviewed. The final two weeks were omitted because another participant joined for the final weeks. The first step in the data collection process was to define or operationalize moments of singing that occurred within the group. Moments of singing were operationalized as a moment in which at least one participant sang words in a recognizable tune or produced a vocalization with varying intonation for longer than five seconds and with communicative purpose. A moment ends when there is a break in singing for a period of 10 seconds.

Twenty-four moments of singing were identified from the first six weeks of an eight-week book club. Another member of the research team reviewed 50% of the data to identify moments of singing using the operationalized definition. This revealed a correlation coefficient of 0.99. The twenty-four moments of song identified were transcribed orthographically using the Jefferson notation for transcription (Atkinson, 1999). Moments were examined in an iterative process; the process involved the team regularly meeting to discuss and review the moments to determine both overarching and subthemes. In the first round of analysis, the moments were open coded and described broadly in terms of the events preceding and immediately following

the singing; initial interpretations of the potential role or function of singing were also noted. For example, at the beginning of the process we identified "singing promotes inclusion" as a subtheme. After further discussion, the team determined that every moment could be coded as "promotes inclusion" and promote inclusion was removed from the subtheme pool.

After the initial process, two coders watched the video clips, read transcriptions, and determined if they agreed, disagreed, or felt another theme or subtheme should be considered by the researchers. The coders consisted of an undergraduate student and a second-year graduate student. Both coders had undergone supported conversation training and were familiar with strategies used by facilitators, as well as PWA to facilitate communication. Following the coders feedback, the team cycled through episodes of singing across conversations and then compared and contrasted episodes across the data set to identify patterns and themes that represented the function of singing. The data were then revisited, and themes were described and refined to most accurately reflect episodes of singing.

Results

Twenty-four moments of song were extracted from the first six weeks of an eight-week book club and analyzed. There were no moments of song identified week three. In week one, one moment was identified. In week two, four moments were identified. In week four, four moments were identified. In week five, two moments were identified. In week six, 13 moments of song were identified.

All of the moments of singing revealed the competence of the group members and highlighted their inclusion in the group. The research team defined competence as group members' inherent ability to participate as individuals and contribute to the group. PWA are typically viewed as *incompetent* in traditional therapy settings (Kovarsky, Duchan & Maxwell, 1999) and often face social isolation as a result of their "incompetence." However, when participants are provided with appropriate tools and "the right interactional circumstances," (Kovarsky, et al., 1999, p. 291) they are able to effectively communicate and demonstrate their inherent competence. Demonstration of competence allows PWA to become a member of a social group due to their contribution. In this study, the moments of singing functioned as a tool in which participants demonstrated their competence; it was also a tool that fostered inclusion. In our data, this surfaced in two unique ways, which we identified as the subthemes of *linguistic* and *interactional competence*.

Linguistic Competence

Moments of *linguistic competence* included episodes in which participants (including those with moderate-severe deficits) produced connected, fluent words via singing. Linguistic competence is also reflected in moments that singing revealed a participant's comprehension of a

given topic. A key moment that illustrates when members of the group demonstrated linguistic

competence was during a conversation about a member's upcoming birthday.

01   JL: Oh happy birthday ((sing song voice))
02   WM: ((sings)) to you happy birthday happy birthday to you
→   03   JA: ((sings)) to you happy birthday to you
→   04   WM: ((Sings)) happy birthday to you happy birthday dear Br- SE happy birthday
       to you and many more
→   05   JA: ((Sings)) Happy birthday to you happy birthday
06   JL: ((sings)) happy birthday dear SE happy birthday to you
07   EE: ((sings)) Happy birthday SE happy birthday to you and many more ((points
       toward WM))
08   DR: ((sings)) Happy birthday dear SE happy birthday to you and many more]
09   SE: ((places hand over mouth and smiles)) no no no(.) Oh ((places hand on her
       heart)) Maybe Maybe
10   JL: Maybe Sees for your birthday?
11   SE: I don't know. Oh! ↑
12   WM: O:::H ↓
       JA points at JL and laughs
13   SE: Maybe (.) Maybe. ↑
14   JL: Maybe I should order them for her ↓ ((taps finger on mouth in a thinking
       motion)) mmm

Once the facilitator had determined that there was an upcoming birthday and date of the

member's birthday, she used a voice with melodic intonation to say happy birthday (Line 1).

This caused both members of the group with moderate-severe aphasia and associated apraxia to

sing the classic birthday song (Lines 3, 4 and 5). The instant response of these members is

related to behavior associated with highly automatic language. Regardless, the singing of two

members caused the rest of the group to join in and sing the entirety of the birthday song. As a

whole, the group is able to demonstrate that they can produce language fluently in this moment.

Another moment of linguistic competence is revealed in the following episode. The

facilitator was aware that one of the group members had recently attended a concert and the

group discusses the event. The facilitator may have been striving to create a moment that would

allow a member who often does not verbally contribute to the group to do so.

01   JL: and JA was telling us when you and (Spouse) went to the Doo-Wop concert
02   JA: yeah ((nods vigorously and points to paper))
03   WM: twenty seven
04   JL: you were just singing along ((dances)) to all the
05   DR: oh yeah:::
06   JA: ba ba ba
07   DR: ((looks and gestures to JA)) that was just last week
08   JL: [couple weeks ago]
09   JA: yeah
10   DR: that you were doin that
11   JA: okay
12   JL: do you remember any of the songs from the, they were like Temptation songs
        ((picks up phone))
13   JA: wop (1) wop wop (2) we::: ahhh
14   DR: [doo-wop doo-wop]
15   JL: ((on phone)) let me google Temptations and see (1) Temptation songs↑ let's
        see our most five saved↓ OOO um::: (2) did they do My Girl?
16   DR: that would be one
17   JA: ((sings)) my girl (1) girl
18   DR: ((sings along)) my girl
19   WM: [((sings along)) my girl]
20   SE: [my girl my girl my girl]
21   JA: my girl
22   EE: they were good dancers
        ((song starts playing from JL's phone and everyone begins to dance)) ((SE is out
        of frame for the duration of the song but is likely singing and humming))
23   DR: ((sings and dances with finger)) xxx sunshine::: xxx day::: I (5) ((looks to
        JA)) I guess you say xxx make me feel this way (.) my girl
→ 24   WM: [sunshine on a cloudy day cold outside (2) May (.) I guess you say (2) my
girl my my girl my girl]
→ 25   JA: [((sings)) I got sunshine xx day do do do do do do I outside (2) may I GUESS
YOU'D SAY XXX this way MY GIRL (2) my girl my girl:::]
26   EE: [sings and bops head back and forth to the music)) sunshine on a cloudy day,
        when it's cold outside, I've got the month of May, ((looks to JA during his
        "solo")) (2) you'd say, (2) this way my girl (3) my girl]
27   JL: [((sings, smiles, and bops head along to the music)) I got sunshine on a cloudy
        day, when it's cold outside (4) ((speaks and looks to John)) HERE JOHN (.)
        SOLO ((sings again)) I guess you'd say (2) make me feel this way, my girl (2)
        talkin bout my girl]
28   DR: there's nothing better about the sixties and seventies
        ((JL turns song off from her phone))
29   WM: ((continues to sing)) ↑so:::
30   SE: ((continues to sing)) ↑so:::
31   JL: ((laughs because WM and SE kept singing and hit the high note))
        ((everyone laughs))
32   EE: I like that one

```
33      JA: yup
34      EE: it's a good one
35      JA: yup
```

When the group realized it was a Doo-Wop concert, the facilitator attempts to find a

popular song in the doo-wop genre on her phone. When she found the popular song, *My Girl*, by

The Temptations, she played it on her phone. Not only was the group member who attended the

Doo-Wop concert singing (see line 25), but so were other members of the group who do not

often contribute with fluent speech. For example, WM who has a stereotypical utterance "twenty

seven" verbalizes several connected words of the lyrics (line 24). This moment is particularly

demonstrative of linguistic competence for JA because the facilitator used this time to ensure that

he had an opportunity to contribute to the group in a valuable way at least once in that week.

Interactional Competence

Moments of *interactional competence* included moments in which the singing reflected

the shared experience and affiliative nature of the group. These moments brought the group

together in a positive way, and are reflective of shared experiences beyond their aphasia

diagnosis. A moment of interactional/social competence was demonstrated in the following

example which spans four moments. The moment was generated by a question from the

associated book club materials, "Is there any special music that reminds you of your spouse?"

While the participant SE could not spontaneously produce the name of the song, she could recall

the tune of the song and hummed, and eventually produced fluent song.

```
01      JL: Do you have any special music that reminds you of your spouse?
02      SE: ((pointing and follows her writing)) [Do you have]
03      SE: Yes
04      JL: Oh what did you write?
05      SE: °Oh gosh° ((points)) um-
06      JL: oh (2) That  ((takes binder))
07      SE: [duh duh duh duh ((hums and moves hand like she's conducting)) ((points to
            her writing)) tiny bubbles da da da da ((hums)) ((nods head))
```

09   DR: ((sings)) [duh duh duh fancy toes]
10   WM: duh duh duh ((humming a different tune than SE))
11   WM: (sings) Tiny bubbles is that it? Tiny bubbles ((pointing down at his paper))
        in the sand in the sand make you happy make you sand]
12   JL: Can I play this? Tiny Bubbles? ((points to SE worksheet))
13   SE: [((nods)) Tiny bubbles in the wine, makes me happy, makes me fine, tiny
        bubbles
14   DR: (sings) Tiny Bubbles]
15   WM: (sings) make you happy]
16   EE: ((points with pen to JA)) [Do you know this?
17   JA: bubbles]
18   EE: ((nods)) You do know it
19   JA: ((nods)) Yes(.) Bubbles ((hums and moves finger like a conductor))
20   JL: Oh my gosh!
21   WM: Tiny bubbles in the sand
22   JL: [Oh my gosh! Tiny bubbles Don Ho]
23   SE: [Yes]
24   DR: Yes]
25   WM: make you= YES, TWENTY-SEVEN]

The rest of the group quickly recognized the tune of the song and joined SE in humming

and commented on the tune. Soon after, all members, including those with moderate-severe

aphasia and apraxia, were either humming or singing fluently. Following the moment of singing,

both facilitators were visibly unfamiliar with the song *Tiny Bubbles* and expressed this. This

moment created a dynamic that separated the facilitators and participants beyond aphasia,

familiarity with this song. It is possible that this song demonstrated a generational gap between

the facilitators and the rest of the group. In aphasia group, there is inherently a separation, and

often a power differential, between clinician and the participants. However, this power

differential is challenged in this moment when the participants have knowledge that the

facilitator does not have access to. This demonstrates an insider (participants) versus outsider

(facilitators) dynamic. In this situation, the insider versus outsider dynamic may have been

caused by age difference or life experiences the facilitator did not have. This moment reveals

social competence because the group members share an insider perspective that allows them to

feel more socially connected, despite their difficulty with language.

After the initial moment of singing, the facilitator used her phone to look up the song and

played a video from YouTube. This further stimulated song among the group. The group sings

along to the video, and the use of technology further stimulated the singing and interaction

amongst participants. This also allowed the facilitators to become a part of this "insider" group

and enjoy the song alongside the group members with aphasia.

	01	JL plays Tiny Bubbles video on her phone
		SE and WM both dance
	02	SE: ((dances)) [Dun dun tiny the bubbles in the wine makes me happy make me feel fine tiny bubbles in the win= make me warm all over ((points to JL)) with the feeling that im gonna love you til the end of time]
	03	JA: [Bubbles] ((dances))
	04	WM: ((starts dancing)) [Tiny bubbles in the sand makes me happy makes me feel fine]
	05	JA: ((dances through the song)) [Bubbles, tiny bubbles warm all over]
	06	JL: oh my gosh
	07	EE: I love this
	08	DR: ha ha ha (3) hahaha (4)
	09	JL: Oh my Gosh ((watches phone)) (4) Look at him drinking the tiny bubbles
	10	DR: ha ha ha (4)
	11	SE:((points at JL and places her finger over her lips)) shhh no no no
	12	WM: Twenty-Seven
		((JL shows WM the phone screen))
	13	SE: ((points at JL)) no no ((smiles at screen))
		JA begins to dance
→	14	JL:((repeats the video)) Repeat after me(.) [Tiny bubbles in the wine]
	15	SE: Tiny bubbles ((laughs)) in the wine makes me happy makes me feel fine tiny bubbles make me warm]
	16	EE: Tiny Bubbles]
	17	DR: Tiny bubbles]
	18	WM: Tiny bubbles in the sand makes me happy]
	19	JL: Tiny Bubbles]
		JL stops the video
	20	JL: Okay so you and {spouse} have a connection to Hawaiian music?
	21	SE: ((reaches for map on table)) [Here(.) Yes(.) Yes(.)]
	22	JL: Your honeymoon?
	23	SE: No [No]
	24	JL: [No]

25   SE: Um ma:ybe uh maybe uh (2) ((starts counting on her fingers)) one see
26   DR: Your wedding?
→   27   SE: no no no no no ((shakes head no)) h:::e went back (3) ((grabs paper and pen to write)) here
28   JL: oh pull off the cap
29   SE: Oh sorry
30   JL: Nope you got it (12) uh-huh church
31   SE: Church
32   JL: Yeah
33   DR: Church
34   SE: ((picks up paper and places it back in the middle)) And
35   JL: did he have a = Did you guys have a church in Hawaii?
36   SE: Yes. Yes.
37   WM: [Yes}
38   JL: Awh that's so sweet

This clip illustrates the group's interactional competence, i.e. a sense that all of the participants are a part of this special group and sharing this unique moment of connectedness. The group taught the facilitators a song and spent time engaged with music that potentially is attached to significant memories. The insider versus outsider dynamic shifts once the facilitators became insiders. The group member who first introduced the song is clearly attached to the song. When the facilitator, JL, begins to comment on the video, SE immediately petitions her to stay quiet through the chorus (line 27). Perhaps to sit with her memories of the song for a moment longer, or just to get the facilitator to listen. Interestingly, the use of technology in this moment facilitated the demonstration of social competence. Not only does the technology bring the facilitators into the group, but it also allows the rest of the group to share significant music from their life with the facilitators.

When the singing continued, it is facilitator prompted, and further solidified the facilitator's membership of the group. The singing quieted for a moment, but when the video, and then the facilitator prompted the group to, "repeat after me," (line 14) the singing picks up. The moment is characterized by a brief period of singing that just follows the chorus of the song.

When the singing calmed, we learned why SE considered this a special song to her. SE briefly

shared a memory of her and her husband at their church in Hawaii with the group. This allowed

her to reveal an individual experience to the group through a song that the whole group was

connected to.

Both Competencies

Interactional competence and linguistic competence were not always separate subthemes.

In some moments, both were present. In these moments, members produced both a stream of

fluent language, and also demonstrated the affiliative nature of the group. A moment of singing

that was demonstrative of both interactional/social competence and linguistic competence was

when the group sang *Take me Home, Country Roads,* a popular song in the Shenandoah Valley

area.

```
        01      JA: river
        02      DR: [yeah yeah]
        03      JL: [you live on the river ((makes a water gesture with hand))]
        04      EE: water
        05      JA: yes
        06      EE: ohhh
        07      JL: [so you get to enjoy the river everyday]
        08      JA: yes
        09      WM: oh wow
        10      DR: [and] where south no north river where
        11      JL: woo in Woodstock (.) right?
        12      DR: oh okay
        13      JA: Woodstock
        14      DR: [yeah]
        15      JL: I don't know what river that is
        16      EE: mmm
        17      JL: river
        18      SE: st s yes
        19      JL: is it the Shenandoah?
        20      SE: no yeah yeah
        21      EE: Shenandoah (2) yeah okay
        22      DR: [Shenandoah (1) ha ha ha ha]
        23      JA: [oh yeah yeah]
→       24      JL: ((sings)) Shenandoah riverrr
```

        25   JA: [rrrrr]
→   26   WM: ((singing)) life is x x-
        26   JA: [ba doo boo boo]
        27   DR: ((laughing))
→   28   WM: ((singing)) the trees (.) younger than the mountain blowing like the breeze
                 (.) country roads take me home to the place I belong (1) Virginia mountain mamma take
                 me home country roads
        29   EE: [((singing)) older than the trees (4) country roads take me home to the place I
                 belong West Virginia mountain mamma take me home country roads]
        30   JL: [((singing)) the mountain blowing like the breeze (.) country roads take me
                 home to the place I belong (1) Virginia mountain mamma take me home country
                 roads]
        31   SE: [((singing)) the mountain blowing like the breeze (.) country roads take me
                 home to the place I belong (1) Virginia mountain mamma take me home country
                 roads]
        32   JA: [me home country roads] duh nun
                 ((everyone laughs))
        33   WM: LA LA LA
        34   JL: I think there's a lot of songs about the Shenandoah River
        35   SE: yes
        36   EE: [yeah (.) Shenandoah]
        37   WM: [yes]
        38   JA: [yeah]
        39   JL: do you know that song EE?
        40   EE: Country Roads? OH yeah
        41   JL: oh she knows
        42   EE: definitely yeah

This moment began as a group member, JA, shared that he lives on the river in the valley.

The facilitator questions what river it is, and once the group realized it is the Shenandoah River

singing is prompted. The facilitator again used melodic intonation to say Shenandoah River, in a

sense prompting the singing (line 24). This further prompted both members of the group with

moderate-severe aphasia and associated apraxia to begin singing *Take me Home, Country Roads*

(lines 26, and 28). Another member with moderate aphasia also joins in and fluently sings the

song. This demonstrated the linguistic competence of these members who often do not contribute

verbally to the group with ease or at all. The interactional/social competence of the group is

simultaneously demonstrated as they share familiarity with this song that is so special to many

people who live in the Shenandoah Valley.

Discussion

PWA are often viewed as incompetent due to the expectation that as an adult communicator they should be capable of effortlessly accessing linguistic and paralinguistic knowledge to communicate effectively and efficiently, but aphasia interrupts that process (Kovarsky et al., 1999, p. 8-9). Based on ableist understanding of communication, when an adult speaker fails to communicate as expected, the communication partner views that person as incompetent. Furthermore, there is lack of access to conversational opportunities because of reduced participation in social situations, such as family gatherings, following the onset of aphasia (Kagan, 1998). These social expectations and decreased participation, as well as the aphasia itself, all mask competence in PWA.

Moments of singing were explored to understand what occurred before, during, and after singing throughout the aphasia book club. Through analysis, an overarching theme of competence surfaced. Two other subthemes were also revealed in analysis: interactional competence and linguistic competence. Moments of interactional competence included moments in which the singing reflected shared experiences and positive social connection in the group. Linguistic moments included moments in which members produced fluent, connected language or demonstrated understanding of the topic of conversation. While there were moments that distinctly fit into the interactional or linguistic competence categories, these themes were not mutually exclusive. Often, a moment would be a prime example of both types of competence. These moments of singing and the themes of competence are striking because they reflect the inherent competence of individuals with aphasia. While our analysis revealed primary themes revolving around competence, singing had other benefits for the group.

Singing and Group Engagement

It was clear that moments of singing promoted engagement in the group. Simmons-Mackie and Damico (2009) identified behaviors indicative of engagement in aphasia groups. These behaviors were identified through conversation analysis of two group therapy sessions for PWA. The conversation analysis revealed three primary markers of engagement: gaze and body orientation, gesture, and shared laughter. These markers were all frequently observed during moments of song in this study. The marker of engagement present in every moment of song was gesture and posturing, especially in the form of dancing. In almost every moment, members of the group would gesture and sway, even if they weren't singing. This was a clear indicator that members of the group were engaged in the moment of singing and with the rest of the group. While gesturing was the marker most frequently observed during moments of song, laughter and gaze were more consistently observed before and after moments of song. The engagement of group members in these moments of song fostered a sense of group camaraderie and reflected the affiliative nature of the group. Engagement likely supported the successful moments of interaction associated with the moments of singing.

Singing in Aphasia Rehabilitation

Singing is an accepted tool in aphasia literature. Music and singing have been used to provide treatment, and also a way to provide a positive social space for PWA. Melodic Intonation Therapy (MIT), focuses on eliciting song from individuals with aphasia to regain the natural prosody, or songlike pattern, of conversational speech (MIT; Helm-Estabrooks & Albert, 2004). This has become a widely accepted treatment approach for PWA. MIT focuses on using songlike patterns to produce single words and everyday phrases to facilitate better communication for individuals with non-fluent aphasia (Norton, Zipse, Marchina & Schlaug,

2009). This form of aphasia treatment demonstrates that music not only positively impacts quality of life but also influence the production of fluent speech. There has also been an increase in the popularity of aphasia choirs. While little research has been done on aphasia choirs, the results indicate that group singing and the social environment of a choir reduces the negative psychosocial impacts of aphasia (Tamplin, Baker, Jones, Way, & Lee, 2013). Although there is not an abundance of literature on choirs for PWA, they have become widespread in the United States.

This study provides support for existing research that demonstrates the positive impact of music for people with aphasia. Moments of song that revealed linguistic competence directly relates to MIT. Singing can support the production of fluent, connected speech both in direct therapy approaches and spontaneous singing. Interactional competence relates more directly to alleviation of psychosocial difficulties associated with aphasia. These moments of singing established members of the group as socially competent despite their language difficulties and promoted affiliation and group membership. These feelings of connectedness impact belongingness and camaraderie in a positive way. Aphasia choirs also promote these positive emotional shifts. This study demonstrates that singing can have a positive impact outside of structured treatment approaches and choirs for PWA.

Limitations

While this study provides support for the positive impact of singing on PWA, it does have limitations. A small pool of data with a limited number of participants was analyzed. In order to better understand the impact of singing in groups, more data would need to be reviewed. It would be crucial to examine additional groups and participants to determine if these themes would still emerge around moments of singing. It is also important to note that other aspects of

group dynamic promote engagement and affiliation. While moments of singing were particularly

striking, singing was not the only feature of the book club that allowed members of the group to

demonstrate competence. The use of principles of supported conversation for adults with aphasia

such as using multimodal communication by writing down key words, gesturing, and relevant

pictures and pictographs also allowed members of the group to reveal their competence.

Moments of humor, such as teasing other group members and facilitators also revealed the

interactional competence of group members. Humor had previously been identified as a way that

PWA reveal competence. For example, Azios et al. (2019) reviewed humor in client-clinician

interactions and discovered that one purpose of humor was demonstrating affiliation. In other

words, the humor was used as a way to demonstrate interactional competence to the clinician.

While singing was striking, it is clear that a number of other behaviors can also reveal

competence.

Conclusion

In this study twenty-four moments of spontaneous singing in an aphasia book club were analyzed to understand what occurred before, during and after moments of singing. These moments of spontaneous singing were remarkable because they appeared to reflect increased participation and strong affiliation of the group. The moments of singing were analyzed using an ethnographic microanalysis that revealed an overarching theme of competence and two subthemes: interactional and linguistic competence. Revealing competence in PWA is crucial, because so often they are viewed as incompetent due to expectations regarding effective communication. PWA can effectively reveal their competence with numerous different behaviors, and this study revealed one way: singing. While this study examined spontaneous singing, it provides support for current research that demonstrates the positive impact of singing on PWA, such as MIT and aphasia choirs. The study also demonstrates support for the understanding that PWA are inherently competent, but need the appropriate tools and "the right interactional circumstances" to demonstrate their competence (Kovarsky et al., 1999, p. 291). While this study had strong implications around the positive impact of spontaneous singing in groups for PWA, it is limited. Given the small number of participants, and a small pool of data, it would be important to examine additional groups and participants to determine if these themes would still emerge around moments of singing.

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Appendix A:

Sample Transcription Week 2

6.   JL: An old judy. Oh four(.) So we are on number four
7.   SE: Yes
8.   JL: Eddy has severa(.) flash(.)backs with his wife Margarete what type of memories does
        he have?↓
9.   SE: ((pointing to her worksheet)) [flashbacks of his wife margareta]
10.   SE: And he:::e's (hhh)
11.   JL: I see you wrote (2) Eddy (1) closes his eyes (2) that ((points))
12.   SE: [and yes] ((points to worksheet)) good good good wife
13.   DR: ((phone rings and DR leaves the table)) oh I'm sorry.
14.   SE: Alright
15.   JL: that's okay ↑
16.   SE: ((points continuously to worksheet)) Eddy Eddy(.) Good
17.   JL: Old Judy Garland song ↓
18.   JA: Yep
19.   SE: mhm and ((Uses finger to follow along writing on page))
20.   JL: reminds him of his wife.
21.   JL: Do you have any special music that reminds you of your spouse?
22.   SE: ((pointing and follows her writing)) [Do you have]
23.   SE: Yes
24.   JL: Oh what did you write?
25.   SE: °Oh gosh° ((points)) um-
26.   JL: oh (2) That ((takes binder))
27.   SE: [duh duh duh duh ((hums and moves hand like she's conducting)) ((points to her
        writing)) tiny bubbles da da da da ((hums)) ((nods head))
28.   DR: ((sings)) [duh duh duh fancy toes]
29.   WM: duh duh duh ((humming a different tune than SE))
30.   WM: (sings) Tiny bubbles is that it? Tiny bubbles ((pointing down at his paper)) in the
        sand in the sand make you happy make you sand]
31.   JL: Can I play this? Tiny Bubbles? ((points to SE worksheet))
32.   SE: [((nods)) Tiny bubbles in the wine, makes me happy, makes me fine, tiny bubbles
33.   DR: (sings) Tiny Bubbles]
34.   WM: (sings) make you happy]
35.   EE: ((points with pen to JA)) [Do you know this?
36.   JA: bubbles]
37.   EE: ((nods)) You do know it
38.   JA: ((nods)) Yes(.) Bubbles ((hums and moves finger like a conductor))
39.   JL: Oh my gosh!
40.   WM: Tiny bubbles in the sand
41.   JL: [Oh my gosh! Tiny bubbles Don Ho]
42.   SE: [Yes]
43.   DR: Yes]
44.   WM: make you= YES, TWENTY-SEVEN]

45.   DR: Is that in the book? Is that in the book?
46.   SE: yes
47.   EE: Yes. No] ((points to JL))
48.   JL: No this is her(.) Does judy garland song reminds eddy of his wife(.) Do you have any music that reminds you ((points toward DR))
49.   SE: [no no no]
50.   DR: [oh↓]
51.   JL: Oh my gosh you guys are awesome!
52.   SE: ((points to paper)) [Alright and(.) And(.) here(.) Here(.) ((points at paper repeatedly and looks at JL)) and where]
53.   JL: Tiny bubbles hold on hold on let me play this]
54.   WM: [tiny bubbles in the sand makes me happy makes me sad tiny bubbles
55.   SE: [in the wine, makes me happy, makes me fine]
56.   DR: That was by uh(.) maybe a Hawaiian?
57.   SE: Yes(.) Yes ((nods and points))
58.   DR: Uh(.) Oh(.) Dan(.) Don Ho
59.   WM: Oh twenty seven ((thumbs up)) Hawaiian ((leans toward JL))
60.   JL: Oh my gosh is that your song with-?
61.   SE: Yes here please please ((points to paper repeatedly))
62.   JL: Well I'm gonna play this because me and Eppie have no idea what you're talking about
63.   SE: Alright ((leans back into her chair))
JL plays Tiny Bubbles video on her phone
SE and WM both dance
64.   SE: ((dances)) [Dun dun tiny the bubbles in the wine makes me happy make me feel fine tiny bubbles in the win= make me warm all over ((points to JL)) with the feeling that im gonna love you til the end of time]
65.   JA: [Bubbles] ((dances))
66.   WM: ((starts dancing)) [Tiny bubbles in the sand makes me happy makes me feel fine]
67.   JA: ((dances through the song)) [Bubbles, tiny bubbles warm all over]
68.   JL: oh my gosh
69.   EE: I love this
70.   DR: ha ha ha (3) hahaha (4)
71.   JL: Oh my Gosh ((watches phone)) (4) Look at him drinking the tiny bubbles
72.   DR: ha ha ha (4)
73.   SE:((points at JL and places her finger over her lips)) shhh no no no
74.   WM: Twenty-Seven
((JL shows WM the phone screen))
75.   SE: ((points at JL)) no no ((smiles at screen))
JA begins to dance
76.   JL: ((repeats the video)) Repeat after me(.) [Tiny bubbles in the wine]
77.   SE: Tiny bubbles ((laughs)) in the wine makes me happy makes me feel fine tiny bubbles make me warm]
78.   EE: Tiny Bubbles]
79.   DR: Tiny bubbles]
80.   WM: Tiny bubbles in the sand makes me happy]

81.   JL: Tiny Bubbles]

JL stops the video

82.   JL: Okay so you and Mr Edwards have a connection to Hawaiian music?
83.   SE: ((reaches for map on table)) [Here(.) Yes(.) Yes(.)]
84.   JL: Your honeymoon?
85.   SE: No [No]
86.   JL: [No]
87.   SE: Um ma:ybe uh maybe uh (2) ((starts counting on her fingers)) one see
88.   DR: Your wedding?
89.   SE: no no no no no ((shakes head no)) h:::e went back (3) ((grabs paper and pen to write)) here
90.   JL: oh pull off the cap
91.   SE: Oh sorry
92.   JL: Nope you got it (12) uh-huh church
93.   SE: Church
94.   JL: Yeah
95.   DR: Church
96.   SE: ((picks up paper and places it back in the middle)) And
97.   JL: did he have a = Did you guys have a church in Hawaii?
98.   SE: Yes.Yes.
99.   WM: [Yes}
100.   JL: Awh that's so sweet

Appendix B:

Sample Coding Table

Preceding Events	Episode and Associated Behaviors	Function	Subthemes	Facilitator or Participant Driven?
SE reads a question from book connections worksheet. The question was about special music that reminds you of your spouse.	SE starts humming "Tiny Bubbles," group begins to demonstrate that they recognize the song (gesturing, nodding)	Confidence booster/reveal competence (SE)	Reveal Social/ Interactional Competence	Participant
SE begins to hum the song	The rest of the group joins in (WM, DR, JA), facilitators don't know the song and don't join in	Affiliation of the group Group competence (Insider vs. Outsider)	Reveal Social/ Interactional Competence	Participant
JL looks up the song on YouTube with iPhone	Group sings along to the YouTube video, members sway and laugh, JL and EE don't sing but smile and sway	Use of technology to display music Affiliation	Reveal Social/ Interactional Competence	Facilitator
JL prompts everybody with "repeat after me"	Group sings along, sways and smiles, WM does NOT join in	Facilitator Affiliation	Reveal Social/ Interactional Competence	Facilitator

Appendix C:

Poster accepted at Speech Language Hearing Association of Virginia State Conference