Humor In Aphasia Therapy: Graduate Student Use and Client Reactions

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Introduction

Aphasia is an acquired language disorder that affects to varying degrees an individual's comprehension and expression of language. Symptoms include difficulty with listening, speaking, writing and reading, as well as gesturing, drawing, and calculating (Cruice, Worrall, & Hickson, 2010). Aphasia may occur when the language centers of the brain sustain damage from a stroke, tumor, or other injury (Beach, 2007), with stroke being the most common cause of aphasia. The elderly population is most at risk for acquiring aphasia in part because as people age, they become more likely to experience a stroke (Engelter et al., 2006). Still, aphasia can affect an adult of any age (The National Aphasia Association, 2009).

People with aphasia (PWA) frequently struggle to articulate the words they are thinking (i.e., naming deficits), to repeat what others say, and to use proper grammar. Also, they may unintentionally create new words during conversation (jargon) or words that have no meaning in the context of the conversation. Aphasia interrupts the connection between thoughts and linguistic input/output (Damasio, 1992). Although persons may have the same thoughts or be capable of understanding spoken or written

information to the same degree as they had prior to acquiring aphasia, they will have more difficulty translating thoughts into coherent speech or decoding spoken and written language into concepts.

One analogy that illustrates this phenomenon likens the functioning of the language centers of the brain to a phone signal. For a person without aphasia, the signal is clear and easy to decipher. The individual is easily able to understand what others say over the phone and has no trouble transmitting a message. In contrast, for a person with aphasia, the signal seems distorted and the incoming message much more difficult to interpret. It is also more challenging for this individual to transmit a message because the signal alters the original message.

Because communication is the avenue through which people express ideas, feelings, and thoughts, communicative impairment may affect an individual's social, psychological, and emotional well-being. It is important that PWA receive effective therapy to help counteract the negative consequences of aphasia. One component of effective therapy is having an adequate interpersonal relationship between the client and clinician, a relationship that is affected by what occurs in therapy. Using more humor during therapy involving a client with aphasia has the potential to make therapy seem more "positive and enjoyable" than a session with less humor (Simmons-Mackie & Schultz, 2003, p. 763).

For many clinicians, graduate school provides the first opportunity to administer therapy to a client. The timing and manner in which graduate student clinicians develop professionally appropriate humor may have implications for their current and future clients. If students are not adequately employing humor, therapy might not be as effective as it could be. Additionally, a better understanding of how graduate students use humor during therapy could provide faculty with information about how much formal training is necessary in this domain for graduate

students. It is thus crucial to investigate how graduate student clinicians use humor and whether their use of humor benefits clients. An exploration into graduate student clinician humor use during aphasia therapy reveals that graduate student clinicians make sessions more positive by effectively using humor.

Of course the term "humor" is subjective. People have different ideas of what humor is, what humorous incidences look like, and what appropriate responses to humor might be. In this study I did not define humor for participants unless they specifically asked for a definition because I did not want to limit responses. I did, however, provide participants with examples of what specific types of humor could look like. In the one instance when a participant explicitly asked for a definition of humor, I approximated Simmons-Mackie and Schultz's definition that humor is "something funny to someone involved in the interaction" (Simmons-Mackie & Schultz, 2003, p. 754).

Literature Review

Language allows expression of a variety of meanings during a social interaction. It enables people to share information, connect on an interpersonal level, and express themselves (Armstrong & Ferguson, 2010). Unfortunately, the language impairments that characterize aphasia change this social interaction and have a profound effect on a person's psychosocial functioning.

Impact of Aphasia

Numerous studies report that the communication deficits caused by aphasia can impact a person's participation in social activities and the breadth of a person's social network. Bose, McHugh, Schollenberger, and Buchanan (2009) conducted a study in which they asked participants with aphasia and a control group of participants without aphasia to complete

Quality of Life questionnaires designed to measure different areas relating to aphasia. People with aphasia reported lower Quality of Life scores compared to typical controls. Also, after comparing the results of the questionnaire categories, the authors concluded that an individual's level of social participation is related to that individual's communication abilities. In particular, severity of a participant's aphasia was correlated with a greater perceived impact of socialization. Thus, these results indicate that communication problems associated with aphasia can adversely affect an individual's social participation.

Acquiring aphasia can also complicate how people interact in the community. Howe, Worrall, and Hickson (2008) investigated which factors beyond the general condition of aphasia impacted the level of community engagement for PWA. By interviewing 25 participants with aphasia to pinpoint what promotes and what discourages community involvement for PWA, the authors revealed that factors raising mindfulness about aphasia promoted involvement. This meant that PWA were more inclined to engage in activities in which people and institutions were cognizant of aphasia and its attendant language patterns. Unfortunately, the authors suggest that most people are unaware of the nature of aphasia. Participants reported that being afforded the opportunity to participate in events and interactions increased the likelihood of community involvement while a lack of opportunity discouraged it. People with aphasia were also more likely to be involved in the community when they would be interacting with others they knew in an unchanging physical setting. The authors noted that people without aphasia might also experience these deterrents and supports to community involvement, but deterrents are more problematic for people with aphasia because the person's language deficit makes issues more difficult to resolve (Howe, Worrall, & Hickson, 2008).

The social networks of PWA can be negatively affected by the

language difficulties related to aphasia. Davidson and colleagues (2008) explored how two groups of people older than 60 interacted with friends. One group consisted of people who had aphasia and the other group consisted of people who did not. Researchers observed participants' typical communication, and participants made reports regarding communication. Three participants with aphasia participated in a simulated recall task that focused on how they communicated with friends. Results showed that people with aphasia are less likely to keep in touch with friends than people without aphasia, a factor that may decrease the number of friends the person with aphasia has. This occurs both because it is difficult for PWA to establish new friends and to retain old friendships (in part because of their difficulties with communication). Vickers (2010) substantiated that finding and investigated how the social networks of PWA changed after acquiring aphasia. Participants with aphasia completed interviews and two questionnaires that included measures of communication skill, social participation, and perceived social support as well as other variables. Results showed that after acquiring aphasia, people reported associating with fewer friends and acquaintances and felt socially isolated.

In addition to feelings of social isolation, people with aphasia sometimes experience depression (Davidson et al., 2008). Because the onset of aphasia is typically abrupt, and the language issues affect most aspects of a person's life, people who acquire aphasia are susceptible to depression. Depression in individuals with aphasia may affect the individual's progress during therapy (Code & Herrmann, 2003), potentially rendering PWA unable to fully engage in the therapeutic process.

Therapeutic Practices and Humor

As aphasia affects the psychosocial dimension of a person's life, it is advantageous for the individual to seek and receive effective therapy

in which the individual may improve language functioning or learn compensatory strategies. Beginning with the post World War II era, aphasia therapy was based on the results of standardized tests (Williamson, Richman, & Redmond, 2011). Therapy during that era emphasized drills and language retraining. Later, Audrey Holland pioneered the notion that functional communication, that is, the practical application and uses of language in social interactions, was more important for PWA than "linguistic accuracy" (Armstrong & Ferguson, 2010, p. 480). This approach prompted others to study how people with aphasia communicate within social contexts instead of focusing on the person's linguistic abilities in isolation (Armstrong & Ferguson, 2010). Currently, both functional communication and language impairment approaches are implemented during therapy with individuals with aphasia, depending on individual client profiles and preferences.

In addition to teaching clients with aphasia practical communication and language skills, it is also important for clinicians to utilize a variety of skills during a therapy session. One aspect of therapy that can potentially provide benefits to a client is the clinician's appropriate use of humor during a therapy session. Potter and Goodman (1983) explored whether humor affected the performance of a client with aphasia during therapy. They provided two participants with aphasia with fourteen sessions of therapy. Researchers recorded the participant's performance on selected therapy tasks that were implemented during each session. In the laugh condition, the clinician played an eighteen-second tape of prerecorded laughter (the humorous element of the study) at the beginning and end of each session. In the non-laughter condition the tape was not played during the session. The researchers found that both participants improved considerably in their therapy tasks across the time in which the laughter tape was played. Interestingly, during the time after the tape was removed,

both participants' performance on therapy tasks started to return to baseline. This finding illustrates that incorporating humor into therapy sessions can make therapy more productive for clients with aphasia.

Simmons-Mackie and Schultz (2003) also examined how humor was incorporated during therapy sessions with individuals with aphasia. They videotaped eight therapy sessions with various speech therapists (professional therapists and graduate student clinicians) and clients. In their analysis, researchers focused on what they considered to be humorous episodes that occurred during therapy sessions. The authors found that humor used during therapy promoted rapport between clinician and client, encouraged involvement in therapy activities by serving as a distraction for challenging tasks, and helped to maintain an individual's self-esteem after making a mistake or during criticisms. Humor potentially made a therapy session more effective because off-putting events were transformed into positive experiences. For instance, a clinician could make feedback more palatable by using humor to make the session more productive without embarrassing the client. Although it was not a major finding of the Simmons-Mackie and Schultz study, the authors did mention in passing that there were no patterns of humor use that differentiated the professional speech pathologists from the graduate student clinicians (2003). This is the only reference I could find in the literature regarding graduate student clinician use of humor during aphasia therapy, a fact that emphasizes the need for further investigation of this topic.

Purpose of the Study

The purpose of this pilot study was to investigate graduate student clinician use of humor and client perceptions of its use during aphasia therapy. Specifically, the two main research questions were:

1. Do graduate student clinicians use humor during therapy, as reported by their clients with aphasia?
2. Do graduate student clinicians report feeling comfortable and experienced using humor with clients, and endorse the importance of humor?

In this study I utilized both quantitative and qualitative measures to survey graduate student clinicians on their perception of humor in therapy and gain insight from PWA about their therapy experiences with graduate student clinicians.

Methods

Participants

To describe clinician and client perceptions of humor use during therapy, this study included two groups of participants with connections to the University of Oregon Speech-Language-Hearing Center: graduate student clinicians and participants with aphasia.

Graduate student clinician participants. Fourteen student clinicians returned surveys and consent forms. Four of the graduate student clinicians indicated they had not provided therapy for a client with aphasia. Only graduate student clinicians who worked with a client with aphasia at the University of Oregon Speech-Language-Hearing Center since beginning their graduate training were eligible to participate. Thus, this study included survey responses from ten participants.

Characteristics of graduate student clinicians. Survey responses indicated that six graduate student clinicians provided individual therapy for clients with aphasia, two provided group therapy, one provided both individual and group therapy, and one participant did not indicate what type of therapy he or she provided. Of the graduate student participants, eight self-identified as female, one as male, and one participant did not

indicate a gender. The ages for graduate student participants ranged from 24-37 years. The number of terms the graduate student clinicians worked with a client with aphasia ranged between one and three terms. Three graduate student participants indicated they received some sort of speech therapy in the past.

Recruitment. All graduate student clinicians who participated in this study were first-year graduate students in the Department of Communication Disorders and Sciences (CDS) at the University of Oregon. I recruited the graduate student clinicians during a practicum meeting that was mandatory for all CDS graduate students and explained the study's purpose and the procedures necessary for participation.

Participants with aphasia. All five PWA who participated in this study had received therapy for aphasia from CDS graduate students in the University of Oregon Speech-Language-Hearing Center.

Characteristics of participants with aphasia. An overview of participant characteristics can be found in Table 1. All participants with aphasia acquired aphasia from a stroke that occurred 3.5 or more years before the current study. Also, the participants were at least fifty years of age, had attended at least three sessions of therapy at the University of Oregon Speech-Language Hearing Center, considered English to be their first language, were Caucasian, and had mild to moderate aphasia. Two participants in this study were male and three were female. Participants with aphasia had therapy at the University of Oregon, but not necessarily during the past year.

Recruitment. My advisor, who specializes in working with people who have aphasia, recruited participants with aphasia through professional contacts. With permission from participants, my advisor provided me with the names and email addresses or phone numbers of people who were eligible and interested in being involved in this study. I called or emailed prospective participants and scheduled interviews.

Table 1
Characteristics of Participants with Aphasia

Participant (P)	Age	Gender	Race	Aphasia Severity	Aphasia Symptoms	Time Post-Onset (Years)
P1	82	Male	Caucasian	Mild-Moderate	Auditory comprehension; word finding	4
P2	75	Male	Caucasian	Mild-Moderate	Auditory comprehension; word finding; writing	8
P3	74	Female	Caucasian	Moderate	Word finding; Apraxia of speech; reading; writing	7
P4	58	Female	Caucasian	Mild-Moderate	Auditory comprehension; word finding; reading	3.75
P5	64	Female	Caucasian	Moderate	Auditory comprehension; word finding; reading; writing	3.5

Informed Consent. After the University of Oregon's Institutional Review Board (IRB) approved the project, recruitment activities began. Researchers involved in this project were Collaborative IRB Training Initiative (CITI) certified. During the study, however, an IRB administrative error was discovered and data collection ceased until the IRB approved changes to specific documents.

Measures

Graduate student clinician participants. The data from graduate student clinicians came from completed questionnaires. In addition to filling out demographic information (i.e., gender, age, number of terms the participant worked with a client with aphasia, number of clients with aphasia the participant has worked with, and whether the participant ever received any kind of speech therapy), the participants rated eleven questionnaire items on a scale from 1-5 (where 1 = strongly disagree and 5 = strongly agree).

Participants with aphasia. Semi-structured interviews were the basis for gathering information from participants with aphasia. An interview guide consisted of questions regarding the participant's demographic information (gender, age, ethnicity, and time since aphasia onset) and eight primary questions. The questions pertained to the participant's overall use of humor, the graduate student clinician's overall use of humor, the length of time the participant had been involved with aphasia therapy at the University of Oregon's speech clinic, comparisons between clinicians, attitudes toward humor use during therapy, and recommendations for graduate student clinicians.

Procedures

Graduate student clinician participants. Each graduate student clinician received a packet that consisted of two identical consent forms, a survey, and instructions including procedures for returning the survey and the date the survey was due back to the primary researcher. Packets were distributed to graduate student clinicians via private clinic mailboxes that belonged to each participant. Because the mailboxes were in a restricted area, my faculty advisor facilitated all document transactions with the graduate student clinicians. Participants returned the questionnaires within one week, as requested. The participants returned the completed surveys and a signed consent forms to my faculty advisor's mailbox. Participants were instructed to keep one consent form for their records.

Participants with aphasia. Interviews with each participant occurred in a reserved room in the Speech-Language-Hearing Center or in a reserved conference room in an adjacent building. Before beginning the interview, I read each line of the consent form with the participant and encouraged the participant to ask questions. After listening to responses to any questions, the participant signed the consent form. Each participant

received an identical consent form for his or her records. With a digital audio-recorder turned on, the interview began with questions that pertained to the participant's demographic information. The questions then followed the interview guide that related to the participant's perception of humor use during aphasia therapy. Throughout the interview, handwritten notes (observer comments) regarding what the participant said supplemented the audio recording.

The nature of the interview was intended to be conversational, allowing opportunities for follow-up questions about a participant's responses. Sometimes follow-up questions were intended to gain more information about a response or used to check for understanding. After the interview, I wrote down topics, patterns, and my perceptions regarding the interview. I then downloaded the audio files from the digital audio-recorder onto my computer. The files were deidentified, coded, and encrypted. I transcribed the interview from the audio file, adding observer comments to the transcript as well as brief descriptions of each participant's communicative ability.

Data Analysis

Graduate Student Clinician Participants

The analysis of the survey data included using descriptive statistics such as the mean, median, and range for each statement to help summarize graduate students' ratings of issues related to humor and therapy.

Participants with Aphasia

All interview data were transcribed by hand with salient and recurrent themes in each interview noted, compiled, and organized into categories based on similarities. Those similarities helped to identify several primary theme categories that described the broader issues that occurred in all (or nearly all) five interviews. The primary themes were: a) manner and role of

humor following stroke, b) presence and role of humor in therapy, c) client perceptions of graduate student clinicians, and d) development of humor use in graduate students. As primary themes encompassed a wide variety of topics, primary themes were divided and organized into subthemes. My advisor also organized the transcript data into themes. We compared our findings and discussed differences we found until we reached agreement. This helped to validate the integrity of themes by minimizing the effect of personal biases and opinions.

Results

The information gathered from graduate student questionnaires and client interviews was analyzed to explore whether clients with aphasia reported that graduate student clinicians used humor during therapy, whether graduate student clinicians reported feeling confident using humor with clients with aphasia, and whether student clinicians considered humor to be important in therapy.

Graduate Student Questionnaires

Based on topics within the questionnaire, items fit into one of the following four categories: a) clinician humor use and response, b) client humor use, c) clinician attitude toward humor, and d) clinician training. Means for the questionnaire responses are presented in Table 2. Individual student clinician questionnaire items and descriptive statistics are located in the Appendix.

Table 2
Student Clinician Questionnaire Means by Category

Category	Mean (m)
Clinician Humor Use and Response	3.9
Client Humor Use	3.4
Clinician Attitude Toward Humor	4.7
Clinician Training	3.2

Clinician humor use and response. This category contained six questionnaire items (items 1-4, 8, and 9) related to the types and amounts of humor student clinicians reported using during an average therapy session with PWA and how student clinicians reported responding to client-initiated humor. Overall, graduate student clinicians reported using various types and amounts of humor during therapy with PWA and reported that they responded positively to humor initiation by clients (m=3.9).

Client humor use. This category contained three questionnaire items (items 5-7) related to student clinician perceptions of the types and amounts of humor their clients with aphasia used during therapy. Overall, student clinicians did not report their clients using specific types or amounts of humor (m=3.4).

Clinician attitude toward humor. This category contained one item (item 10) about the attitude of student clinicians regarding how important they considered humor in therapy to be. Overall, student clinicians reported that they consider humor an important aspect of therapy (m=4.7).

Clinician training. This category contained one item (item 11) about perceptions of how well formal training had prepared student clinicians to use humor during aphasia therapy. Overall, student clinicians neither agreed nor disagreed that their training prepared them to use humor in therapy (m=3.2).

Interviews with PWA

Every participant spoke of some use of humor, whether their own or that of graduate student clinicians in clinical or nonclinical settings. During interviews participants spoke about a variety of topics that related to humor, such as specific reasons for using humor, their individual preferences regarding humor, or about the nature of humor. Primary theme

categories that emerged across interviews included a) the manner and role of humor following stroke (change in humor after stroke and humor as a way to cope and connect), b) the presence and role of humor in therapy, c) client perceptions of graduate student clinicians (congeniality, satisfaction, responsiveness, and variety in graduate student clinician humor use), and d) the development of humor use in graduate students (preexisting humor and humor improvement).

Manner and role of humor following stroke. Participants noted how their sense of humor was (or was not) affected after having a stroke.

Change in humor after stroke. During interviews, all participants were asked whether their sense of humor changed after acquiring aphasia. There were a wide variety of responses to this question. One participant reported a reduction of humor use after acquiring aphasia. Two participants said their humor use did not change. One participant said the amount of humor she used increased slightly, and one participant said her sense of humor decreased after her stroke but has since improved. Additionally, in another part of the interview, Participant 2 noted:

> It occurs to me, because there is times, times when your sense of humor isn't as effective, when you're trying to get some information that doesn't come out, that you'd like to get it out, so you're trapped and you so that, that happens. And I think more severe aphasias may have more difficulty with it. I'm pretty lucky. I am not as bad as shape, but I am not as severe damage as a lot of people are.

Participant 2's observation suggests that aphasia severity might affect how a person with aphasia is able to express a sense of humor.

Humor as a way to cope and connect. Three participants related humor to coping and connecting. Two participants identified humor—implicitly or explicitly—as a way to cope with difficult issues, such as

aging, death, and the frustrations and fears associated with having a stroke and acquiring aphasia. For instance, Participant 5 stated:

> Then they'll [clinicians] know I really am have a stroke but it's still okay, you know. But it's okay, it's fun for me to be laugh. You know, and you, that's after all this time it's been very, you know, if you cry, that'd be not so good, well I, my job is when I'm done, with this, and I can talk and do what I'm doing.

Two participants associated humor being able to connect with other people. For example, Participant 1 described using humor to connect to other people in a building complex:

> All, old all people in there. Some people are a hundred. One guy is ninety-seven. A woman is one-hundred and two, and to keep up with them, I have to see, making, everything funny for them, you know? What the hell's the point, why's it they, they're thinking while they're dying, you know, so I have to try, you know, and tell something funny.

Participant 2 noted that he used a sense of humor when he interacted with people at his work. He spoke of a man who was difficult to be around because his severe aphasia seemed to make him unreceptive to humor. This participant also suggested that using a sense of humor helped make interactions more "natural,"

> I, I can communicate most of the time on just general comments. Like, I can handle that, and I can use constantly a sense of humor... that's the most natural part of it, whenever I'm with anybody, whether they whether they have aphasia or don't have aphasia.

Presence and role of humor in therapy. In addition to speaking about humor in the context of nonclinical environments, participants also noted the presence of humor during therapy. One aspect of therapeutic humor they discussed was the value of humor in therapy. All five participants

agreed that humor helps during therapy or is otherwise important during therapy. When asked if humor helps during therapy, Participant 2 stated:

> Oh, I'm sure, yeah. I- And it's a good question, because if you're investigating this process, finding a way to make its advance, advance continue to become part of the process, I think it's extremely important.

Two participants spoke of how humor can further therapy. One participant said that humor provides a break during difficult therapy tasks and that it serves as an alternative to crying. Another participant suggested that graduate student clinicians should use verbal humor to help clients improve. A different participant responded that using humor and talking during therapy helped him to get his clinician's attention. Two participants reported the importance of therapeutic tasks. One of those two believed that humor in therapy should not take precedence over these tasks (humor should be used rather than "comedy"), while the other spoke about how her professional clinicians expected her to complete challenging therapeutic tasks, which the participant seemed to appreciate.

Client perceptions of graduate student clinicians. Participants gave explicit overall impressions of graduate student clinicians and their humor use. Overall, participants spoke very favorably about graduate student clinicians. Clinicians were typically considered to be congenial (i.e. "pleasant" to work with), used humor satisfactorily, and were generally responsive to the participant's humor use.

Congeniality. Regarding the student clinicians' overall personality characteristics, two participants reported that graduate student clinicians, as a group, were typically "pretty friendly" and "just very nice people." Even when a participant commented that student clinicians somehow deviated from this affable baseline, the participant attributed the behavior to a positive source, professionalism, as seen in the following exchange:

> Participant 5: Um, well they have to be, you know, they're the dog-I mean they're going to be doctors or not, you know, so they have to be a little like that. If I'm a little...that's fine, so...I think I think they were good people but nice too.
>
> Researcher: ...So kind of nice but professional?
>
> Participant 5: Yes, exactly.

Satisfaction. Four of the five participants, when asked if their clinicians did a good job of using humor, reported being pleased with the humor graduate student clinicians used during therapy. Some participants referred to the graduate student clinicians as a group while others referred to the most recent student clinician they had seen. One participant said that his clinician's humor use was "comfortable" without being "overwhelming." Another participant stated what she thought was the ideal amount of humor and said the amount of humor her graduate student clinician used was the amount she considered ideal.

Responsiveness. Some participants commented specifically on the pragmatics associated with humor use in therapy sessions with graduate student clinicians. Two participants described their student clinicians' humor use as being interactive. This essentially means that instances of using humor during therapy (or not using humor) by one person affected how the other person used humor. For instance, Participant 3 suggested that clinicians and clients adjust their humor use in response to the other person's humor use during therapy and that it is difficult for clients to use humor during therapy if the clinician does not:

> I- All of the kids have been very good about that ev- however one of them um probably because I also did it. Not you know, is it, once in a while you have someone and you say um if the pe- if the other person doesn't do very much eventually you, you can't

> do too much but if you know you're there and I'm in this is me [draws four circles, two of them next to each other, and draws arrow between them indicating one influences the other and vice versa].

Participant 2 made a similar observation:

> I think sh- I think most of them including the last girl, I forgot her name now uh, and they're very pleasant and aren't in a position to start humor. They're drawing people who have aphasia and if they if I or somebody starts some sense of humor comment their feedback is usually in tune and relate with their sense of humor. So as a responsive more as sense of humor than initiating, I think that's the difference.

Also, P2 observed that clinicians typically do not "initiate" humorous interactions, but do reciprocate humor when a client uses it.

Variety in graduate student clinician humor use. Participants spoke about the amount and types of humor graduate student clinicians used during therapy. Overall, responses varied. Sometimes the response referred only to the most recent experience of working with a graduate student clinician, and sometimes the response referred to graduate students as a group. Regarding the amount of humor their graduate student clinicians used during therapy, participant reports ranged from no humor to "a lot" of humor. Three of the five participants were questioned directly about the types of humor—verbal and nonverbal—that their clinicians used. Regarding graduate student clinician use of verbal humor, one participant reported that graduate student clinicians differed in their use of humor; one said they did not "necessarily" use verbal humor, and another said they did. Regarding graduate student clinician use of nonverbal humor, two participants said student clinicians did not use nonverbal humor, and one said they did.

Development of humor use in graduate students. Participants made observations about humor acquisition that indicate student clinicians enter graduate school using humor. They also commented about how the student clinicians' humor use improved during students' career.

Preexisting humor. Two participants indicated that graduate student clinicians used humor in a natural way or suggested that the skill seemed to have been at least partially mastered prior to entering graduate school. Participant 2 said of graduate student clinicians (as well as professional clinicians and volunteers who work with people who have had a stroke) "they're in a business that they work with people and so they automatically become part of the process and have to have a sense of humor and relate to people." This suggests that perhaps the people who choose to work with stroke survivors have a natural propensity for "relating" to others as well as using humor. Participant 2 also explicitly said of student clinician humor use during therapy, "It was just natural." Another participant said that humor was "always there" (in therapy). These findings suggest that the student clinicians entered graduate school with the ability to use humor.

Humor improvement. Two participants indicated that student clinicians became better at using humor over time. Participant 5's comments suggest that the student clinician use of humor may improve over a term because they become more comfortable with the client during that time. In a later section of the interview, after being asked if her professional speech pathologists use more humor than graduate student clinicians, Participant 5 responded, "Well, I've known him for two and a half years, so yeah, now it's easier, yeah."

Participant 4, who had therapy with both masters and doctoral students, stated that "they're more humorous at the doctorate le-level, because uh, they're more serious at the Master's Degree because they're more, they're more, the- they're just, it's, it's just their personality." This suggests that

during the course of their careers, graduate student clinicians are more likely to employ a sense of humor after they accumulate more experience (as is the case with the doctoral students). Participant 4 added that "and um, but the the uh the master's students I think are learning." After being asked whether she thought teachers could help student clinicians learn to use humor more effectively in therapy she replied, "No they just learn it... They just learn it on their own." Participant 4's comments suggest that student clinicians might improve in their humor use through experience.

Discussion

The purpose of this study was to explore how graduate student clinicians use humor during therapy with clients who have aphasia. Research question 1 examined client perceptions of humor use during therapy, and results showed that most clients reported that student clinicians use humor during therapy. Clients did not report about specific types or amounts of humor, but suggested that graduate student clinicians were responsive to client humor use. Overall, clients reported being satisfied with student clinician humor use. Also, reports suggested that student clinicians seem to enter graduate school using humor and that they improve their use of humor over time. This result differs from what Simmons-Mackie and Schultz (2003) observed, in that they did not note patterns in humor use based on a clinician's experience level. Research question 2 examined student clinician comfort, experience, and perception of humor. Results suggested that graduate student clinicians endorse the use of humor during aphasia therapy. Results from questionnaires were inconclusive regarding how student clinicians rated their comfort level and experience using humor in therapy sessions.

Results from the questionnaire and interview data suggested that both student clinicians and participants believe that using humor helps

or is important during therapy sessions. Both measures also indicated that graduate student clinician humor use varies both in terms of type and amount. This finding, coupled with the finding that student clinicians reported being aware of how they respond to their client's initiation of humor, supports the idea that student clinicians adapt their humor use to become more in sync with clients' humor use rather than using a set type or amount of humor. Because participants with aphasia reported a high satisfaction rate regarding student clinician humor use, this method of delivering humor appears effective. The harmonious use of humor between student clinicians and clients probably makes therapy more comfortable and thus a more positive experience. Also, using humor would likely help the student clinician and client feel more connected, a phenomenon Simmons-Mackie and Schultz (2003) called "building solidarity and affiliation" (p. 758). Furthermore, it seems if student clinicians respond positively to clients' attempts to initiate humor, all or part of the session would become more positive. If clients feel their attempts at initiating humor are validated, the result could be a more favorable view of the clinician, a factor that could explain why participants with aphasia reported that student clinicians were congenial. Code and Herrmann (2003) argue that "motivation increases and language and cognitive performance improve with positive mood and well-being" (p. 122). This suggests that the way graduate student clinicians use humor during therapy with PWA makes therapy more effective when the client's positive affect is enhanced.

The main limitations of this pilot study pertained to the limited sample of participants. Five interviews and ten questionnaires from individuals who were involved in therapy in the same university might not have provided a representative view of how all graduate student clinicians and PWA view graduate student clinician humor use during therapy. Future research samples could be significantly larger and might incorporate

views from multiple participants at numerous university clinics across the United States. Because the population used in this study was homogenous in terms of race and ethnicity, future studies might take this into account by including a heterogeneous sample of graduate student clinicians and PWA from multiple ethnic and racial backgrounds.

Two limitations related to the design of this study were that PWA only participated in one interview and that the graduate student clinicians did not participate in interviews. Future studies should include a more longitudinal design in which PWA would have multiple opportunities to share their experiences. If a client thought of any new insights between interviews, the client could then share those insights with the researcher. This design would also allow the researcher to confirm that his or her perceptions of the previous interview were correct and follow up on themes revealed in previous interviews. Overall, the depth of client's perceptions would be more extensively revealed. Further, although the questionnaires quantified the graduate student clinicians' perceptions of humor use during therapy, it also limited the graduate students' ability to share insights about humor use during therapy. Future research designs could incorporate interviews to gather more in-depth information from student clinicians. In addition, this expended information would be more easily compared to that from PWA. Those results might reveal specific similarities and differences between student clinician and client perceptions of humor use that were not captured by comparing the results of interviews to questionnaires. Also, both questionnaires and survey guides could include five or six examples of verbal and nonverbal humor, and a number range could be assigned to items measuring humor amount to make items less subjective (i.e. using humor "rarely" in a session would be 0-1 instances of humor each session). Researchers might also ask participants to describe how they define the concept of humor.

Findings from this study and future studies examining graduate student clinician humor use might be considered in the designs of new therapeutic practices. In an age when technology is advancing rapidly, there is the possibility that in the near future, student clinicians and clients may begin to rely more heavily on technology during therapy sessions for PWA. In some cases, technology might even alter the structure of therapy so that clients rely more heavily on technology and less on the student clinician. For example a client might be able to use a computer program on a home computer to go through speech drills rather than attending a therapy session. Although new technologies have the potential to improve therapy, findings from this study emphasize that student clinicians and clients should consider employing technology in a way that still creates opportunities for humorous interactions to occur during therapy so that a positive therapeutic experience may be maintained.

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Appendix

Graduate Student Clinician Questionnaire Items

Number	Item
1	I use/initiate a lot of humor during an average therapy session with a client who has aphasia.
2	I use/initiate a lot of verbal humor (comments, jokes, etc…) during an average therapy session with a client who has aphasia.
3	I use/initiate a lot of nonverbal humor (facial expressions, gestures, etc…) during an average therapy session with a client who has aphasia.
4	I initiate humor more often than my client who has aphasia.
5	My client initiates a lot of humor during an average therapy session.
6	My client uses/initiates a lot of verbal humor (comments, jokes, etc…) during an average therapy session.
7	My client uses/initiates a lot of nonverbal humor (facial expressions, gestures, etc…) during an average therapy session.
8	I am very aware of how I respond to my client's attempts at initiating humor during therapy.
9	I respond positively to my client's attempts at initiating humor during therapy.
10	I think humor is an important part of therapy for clients with aphasia.
11	I feel my undergraduate and graduate professional training have provided me with adequate skills and knowledge regarding using humor during therapy.

Descriptive Statistics from Graduate Student Clinician Questionnaires

Statement #	Statement	Topic	Mean (m)	Median	Range
7	My client uses/initiates a lot of nonverbal humor (facial expressions, gestures, etc…) during an average therapy session.	Client Humor Use	3.5	4	1-5
8	I am very aware of how I respond to my client's attempts at initiating humor during therapy.	Clinician Humor Use and Response	4.3	4	3-5
9	I respond positively to my client's attempts at initiating humor during therapy.	Clinician Humor Use and Response	4.7	5	4-5
10	I think humor is an important part of therapy for clients with aphasia.	Clinician Attitude Toward Humor	4.7	5	4-5
11	I feel my undergraduate and graduate professional training have provided me with adequate skills and knowledge regarding using humor during therapy.	Clinician Training	3.2	3	2-5

Descriptive Statistics from Graduate Student Clinician Questionnaires

Statement #	Statement	Topic	Mean (m)	Median	Range
1	I use/initiate a lot of humor during an average therapy session with a client who has aphasia.	Clinician Humor Use and Response	3.95	4	2-5
2	I use/initiate a lot of verbal humor (comments, jokes, etc…) during an average therapy session with a client who has aphasia.	Clinician Humor Use and Response	3.8	4	2-5
3	I use/initiate a lot of nonverbal humor (facial expressions, gestures, etc…) during an average therapy session with a client who has aphasia.	Clinician Humor Use and Response	3.5	3.5	2-5
4	I initiate humor more often than my client who has aphasia.	Clinician Humor Use and Response	3.2	3	2-5
5	My client initiates a lot of humor during an average therapy session.	Client Humor Use	3.5	3.5	3-4
6	My client uses/initiates a lot of verbal humor (comments, jokes, etc…) during an average therapy session.	Client Humor Use	3.3	3.5	2-4