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Abstract

Background: Training conversation partners of people with aphasia to use facilitative communication strategies is one method that can improve access to healthcare for people with aphasia. However, the efficacy of communication partner training has been investigated almost exclusively in the context of face-to-face delivery. Online training may offer more cost-effective and accessible options to a wider range of conversation partners, including student healthcare professionals. *Aims:* The aim of this study was to conduct a pilot randomised controlled trial with student healthcare professionals comparing i) an online aphasia communication partner training program, ii) a face-to-face communication partner training program and iii) no program (control group) on outcomes relating to attitudes and knowledge of aphasia. *Methods & Procedures:* A 45-minute introductory aphasia communication partner training program was developed using the theories and techniques of Supported Conversations for adults with Aphasia™. Thirty first-year undergraduates studying occupational therapy at The University of Sydney were randomly allocated to one of three conditions: online communication partner training delivery, face-to-face delivery, or delayed training control (no program). Outcomes measures included pre-post testing with the Aphasia Attitudes, Strategies and Knowledge (AASK) survey. *Outcomes & Results:* A significant difference existed for the AASK survey pre-post change scores between the online, face to face, and control groups ($X^2(2) = 20.038$, $p = .000$). Post-hoc analysis revealed that, compared with the control group, participants in both the online and face-to-face groups had significantly higher knowledge of aphasia (Online vs. Ctrl: $p=0.000$; F2F vs. control: $p=0.002$), knowledge of facilitative strategies (Online vs. Ctrl: $p=0.000$; F2F vs. Ctrl: $p=0.002$), and positive attitudes towards aphasia (Online vs. Ctrl: $p=0.031$; F2F vs. Ctrl: $p=0.032$). No significant difference was observed between the online

and face-to-face groups for the Total or any subtotals ($p = 1.000$). *Conclusions and Implications:* The results from this pilot randomised controlled trial indicate that online delivery of the 45-minute introductory communication partner training is equally as efficacious as face-to-face delivery, and thus may be a viable mode of delivery for future aphasia communication partner training programs. These pilot results pave the way for a larger study that will comprehensively evaluate the efficacy of an online aphasia communication partner training program for improving attitudes, knowledge, and skills in a broad range of student healthcare professionals.

Keywords: aphasia, communication partner training, randomised controlled trial, digital health, online, elearning.

What this paper adds

What is already known on this subject. The efficacy of face-to-face communication partner training for aphasia is well established. Online delivery of communication partner training programs may offer more cost-effective and accessible services when compared to face-to-face approaches, however there is a need to explore the efficacy of online programs.

What this study adds. The 45-minute online aphasia communication partner training program was found to be efficacious for improving student healthcare professionals' knowledge and attitudes towards aphasia and communication, and produced equally successful outcomes when compared to face-to-face delivery. This is the first study to report the efficacy of an online communication partner training program that is aligned with Supported Conversations for adults with Aphasia™ for use with student healthcare

professionals that also utilises a self-report outcome measure with validated psychometric properties.

Clinical implications of this study. Online communication partner training programs may be useful in both clinical and education contexts to support improved efficiency of services and to enhance communication environments for people with aphasia in healthcare contexts.

Word count: 7,616

Introduction

Individuals with aphasia are a high-risk group in healthcare settings where services are mediated mostly—if not entirely—by verbal communication. In report on patient safety, the World Health Organization established that over 60% of reported medical errors were caused by poor communication in healthcare settings and concluded that improving the quality of communication in these settings can help prevent medical errors (World Health Organization, 2008). Another study found that patients with a communication disorder, compared to patients without a communication disorder, were more likely to experience a preventable adverse event in acute care settings (Bartlett *et al.*, 2008). In addition, although people with aphasia are competent to make decisions about their own healthcare, the nature of their communication impairment means they are often left out of the decision-making process (Simmons-Mackie *et al.*, 2007). Communicative environments in healthcare settings can be inaccessible for people with communication impairments such as aphasia (O'Halloran, Grohn, and Worrall, 2012). The importance of being able to participate in the communicative environment of any setting is highlighted in the World Health Organization's International Classification of Functioning, Disability and Health (ICF) (World Health Organization, 2011). One method that has been shown to enhance the communicative environment of people with aphasia is communication partner training.

Communication Partner Training

Communication partner training (CPT), also referred to as supported communication or conversation partner training (Horton *et al.*, 2015, Kagan, 1998), enhances the communicative environment for people with aphasia. It provides important conversation partners (e.g., a spouse, a carer) with facilitative communication strategies directed at

improving the quality of communicative exchanges and reducing communication breakdown (Simmons-Mackie *et al.*, 2010). In healthcare contexts, implementation of these facilitative communication strategies by healthcare professionals offers a means to reduce barriers in the communicative environment, enabling people with aphasia to access information and make informed decisions about their own healthcare (Horton *et al.*, 2015).

Most CPT programs fall into one of two types of groups (Simmons-Mackie *et al.*, 2016): 1) training with both the conversation partner and the person with aphasia present, with the aim of tailoring intervention to the dyad; or 2) training involving the communication partner without the person with aphasia present, often in a group setting, with the aim of targeting general knowledge of aphasia and its impact on communication as well as providing facilitative communication strategies (Finch *et al.*, 2017, Cameron *et al.*, 2015, Jensen *et al.*, 2015). While interaction-specific training has been shown to improve communication between people with aphasia and their familiar conversation partners (Simmons-Mackie *et al.*, 2005), it is less feasible to implement this type of training with larger groups of less frequent, less familiar conversation partners, such as healthcare professionals (Chang *et al.*, 2018). Further, different healthcare professionals may have different training needs.

Supported Conversation for Adults with Aphasia™

A widely-researched and adapted CPT program for larger groups of conversation partners is the Supported Conversation for Adults with Aphasia (SCA™) program (Kagan, 1998). SCA™ draws on traditional aphasia therapy treatment including pragmatic, functional communication, and augmentative and alternative communication approaches, combined with the idea of ‘conversational partnerships’ where the communication partner shares the responsibility of the ‘communication load’. SCA™ training aims to provide people with

aphasia with genuine communication opportunities by improving the skills of both the person with aphasia and the conversation partner (Kagan, 1998). SCA™ has been employed with different types of conversation partners, including aphasia centre volunteers (Kagan *et al.*, 2001), nursing assistants (Welsh and Szabo, 2011), and multidisciplinary healthcare teams (Simmons-Mackie *et al.*, 2007, Heard *et al.*, 2017). Together, the results of these studies have indicated that receiving an SCA™-based CPT program increases knowledge of aphasia and can provide conversation partners with facilitative communication strategies that can enhance the communicative environment of people with aphasia.

Communication Partner Training for Student Healthcare Professionals

Another group that may benefit from CPT is student healthcare professionals. Whilst there is a growing body of research examining the efficacy of CPT for healthcare professionals in the workforce (Horton *et al.*, 2015, Welsh and Szabo, 2011, Jensen *et al.*, 2015, van Rijssen *et al.*, 2018, Cameron *et al.*, 2017), there is little evidence of CPT efficacy for student healthcare professionals. There are a number of potential advantages to providing CPT programs to students at the tertiary education level. Firstly, healthcare students are often already engaged and motivated learners (Misch, 2002) who are receptive to knowledge acquisition. Secondly, most students have not yet had the opportunity to form maladaptive and/or unsafe communication attitudes, behaviours, and habits in the workplace (World Health Organisation, 2008). Therefore, investigating the efficacy of CPT in a population of student healthcare professionals is indicated to help prepare student healthcare professionals with knowledge and skills to maximise their initial success in interacting with people with communication disability.

Research investigating the efficacy of CPT for student healthcare professionals is limited. Legg, Young and Bryer (2005) reported on a randomised controlled trial (RCT) in

which 21 sixth-year medical students were provided with either regular medical school theoretical training in aphasia (control) or an SCA™-based CPT program (experimental group). The primary CPT outcome measure utilised was a modified version of the rating scale measure validated by Kagan *et al.* (2004). Results indicated that the experimental group had significantly greater improvement than the control group in the ability to obtain a medical case history from a person with aphasia. A more recent study evaluated pre-post changes in the confidence ratings of 28 allied health students who engaged in a CPT program (Cameron *et al.*, 2015). The program included both a lecture component and an interaction with a person with aphasia, and improved the students self-ratings of confidence when interacting with persons with aphasia (Cameron *et al.*, 2015). Finch *et al.* (2017) randomized 38 speech-language-pathology students to either a lecture-based CPT program (experimental group) or a no training program (control). Outcomes were evaluated with the Measure of Skill in Supported Conversation and Measure of Participation in Conversation (Kagan *et al.*, 2004). The lecture significantly improved students' scores on the Revealing Competence scale of the Measure of Skill through application of communication skills, though no other significant improvements were found (Finch *et al.*, 2017). Finally, one of the most recent studies has explored the impacts of a self-directed learning (including an SCA™-specific online module) combined with face-to-face components (including role plays) with six occupational therapy student healthcare professionals (Doherty and Lay, 2019). Increases were noted in the raw data for students' knowledge, skills, and confidence in their ability to communicate with people with aphasia. However, results were not analysed for significance due to the sample size and face-to-face and online elements were combined rather than compared. In conclusion, there is a very small body of evidence supporting the efficacy of face-to-face CPT training for improving student medical and allied health

professionals' confidence and communication skills. The need to expand this literature is particularly crucial in light of the fact that people with aphasia receive healthcare from a vast range of health professions throughout their ongoing care trajectory. Moreover, the efficacy of CPT delivered in an online learning environment compared to face-to-face delivery has not been investigated with student healthcare professionals. Online delivery may include computer-based modules accessed without health professional involvement or real-time interaction with health professionals via teleconference. Online learning environments are critical elements of contemporary blended learning approaches in tertiary education and training (Medina, 2018). Therefore, the feasibility of training a larger number of unfamiliar individuals in general may be enhanced with online methods embedded into blended curriculums.

Online Versus Face-to-Face Delivery of Communication Partner Training

There are three known studies that indicate online CPT programs offered in telehealth and elearning formats may yield equivalent results in comparison to face-to-face programs. A pilot study reported increased knowledge and confidence in 19 registered nurses following self-directed online delivery of a CPT program (McKinley and O'Halloran, 2016). A more recent study involved 48 healthcare professionals working in an inpatient rehabilitation setting (Heard *et al.*, 2017). Here, a face-to-face CPT program (two 90-minute modules) was compared with an e-learning CPT program (30-minute online module and a 60 minute face-to-face module). Improvements were found for confidence and knowledge with no differences between the delivery modes. However, the programs were not identical in content, making it difficult to establish the impact of delivery mode in this study. The findings were supported in the most recent evidence from 55 healthcare professionals (occupational therapy, dietetics, and physiotherapy) from a metropolitan hospital

(Cameron *et al.*, 2019), where real-time teleconference and face-to-face CPT delivery modes for identical program content were compared. Post-training improvements were found for confidence and knowledge, with no difference between delivery modes. Other online training studies that have not directly targeted CPT have indicated feasibility (Irvine *et al.*, 2007), equivalence of online training to face-to-face training (Maloney *et al.*, 2011), and the cost-effectiveness of such methods in student populations (Dankbaar *et al.*, 2014).

However, several limitations were identified in this body of literature, including lack of control group data and use of outcome measures with reported psychometric evaluation.

There is significant potential for online learning to support sustainable and accessible education, particularly as it lends increased flexibility regarding the time of delivery and that a person with aphasia is not required to be present—an element of some face-to-face training that is not always feasible. Presently, there is a limited evidence base to support online learning for aphasia. Consequently, there is a need to strengthen this evidence by comparing online versus face-to-face delivery of a CPT in educational contexts, such as with student healthcare professionals in a brief education program that would fit into a standard lecture time, utilizing an outcome measure with validated psychometric properties.

Aims

The aim of the present pilot study was to investigate the efficacy of an SCA™-based aphasia CPT program delivered either online or face-to-face to a sample of student healthcare professionals. Specifically, this paper reports a three-arm RCT in which 30 first-year undergraduate occupational therapy students were allocated to either one of two training groups (online or face-to-face CPT delivery) or a control group which received a scheduled occupational therapy lecture and were able to access the online CPT training after the study was completed. The overarching research questions were:

1. Does a CPT program improve undergraduate occupational therapy students' (a) composite knowledge and attitudes towards aphasia, (b) knowledge of aphasia, (c) knowledge of facilitative communication strategies for engaging with people with aphasia, and (d) attitudes towards people with and without aphasia compared with students who did not receive the CPT program.

2. For students who received the CPT program, does the mode of delivery (online versus face-to-face) of an aphasia CPT program result in different outcomes?

It was hypothesized that the CPT program would significantly improve a) overall knowledge and attitudes towards aphasia, b) knowledge of aphasia, c) knowledge of facilitative strategies for aphasia, and d) attitudes towards people with and without aphasia. It was also hypothesised that, for students that received the CPT program, the online and face-to-face programs would be equally efficacious.

Methods

Study Design

This pilot study employed an RCT using a 3 (face-to-face delivery, online delivery, control group) x 2 (pre-test, post-test) mixed design to compare outcomes of different aphasia CPT program delivery modes. This study received approval from the University of XXX's Behavioural and Social Sciences Ethical Review Committee (ref: XXX), and was conducted in accordance with these conditions. This project was funded by an XXX grant (ref: XXX) [details redacted for blinded peer review].

Participants

Thirty first-year undergraduate occupational therapy students were recruited from The University of [detail redacted for blinded peer review]. Figure 1 depicts the study's design and participant flow. Participant inclusion criteria were: 1) first year undergraduate;

and 2) studying occupational therapy. Participants were recruited via digital and in-person announcement by the investigators during first-year undergraduate occupational therapy units of study over a period of 2 months. Participants included 27 females and 3 males with an average age of 20.5 (± 4.78) years. Twenty-three participants were born in Australia and one-third of the participants spoke a language other than English at home, including Cantonese, Mandarin, Arabic, Assyrian, and Korean.

(Insert Figure 1 about here)

Materials

Recruitment was possible up until the day before participation was scheduled, with 30 participants recruited during this time. Participants were randomly allocated using concealed allocation procedures to one of three conditions: face-to-face aphasia CPT delivery; online aphasia CPT delivery; or control. While the online and face-to-face groups completed the CPT, the control group received an unrelated scheduled occupational therapy lecture. The training groups then received the scheduled lecture and the control group completed the online CPT module after the study was completed. Randomised and concealed participant allocation was achieved by using opaque envelopes that contained identical pre- and post-test survey forms and were thoroughly shuffled before being distributed by a person independent to the research project. Blinding was achieved by having multiple investigators involved in the recruitment (EP, KF, and LT), participant allocation (KF), and data analysis (KF and RH), and by assigning random participant numbers (KF). Participant blinding was not possible. All participants who were randomly assigned to the CPT program completed it. As this was a pilot study, an accurate prediction of sample size was unable to be determined. No changes were made to the methods after commencement of the trial.

Aphasia conversation partner training program content. The aphasia CPT program was entitled, “Communicating with People with Aphasia in Healthcare Contexts”. This program was designed specifically for healthcare professionals and is based on Supported Conversation for Adults with Aphasia (SCA)[™] (Kagan, 1998). The aphasia CPT program addresses three principal content areas: 1) knowledge of aphasia and its impact on healthcare; 2) facilitative communication techniques for aphasia; and 3) attitudes towards communicating with a person with aphasia. The facilitative communication techniques focus on the constructs of ‘acknowledging competence’ and ‘revealing competence’ (Kagan, 1998). Techniques for acknowledging competence are directed towards ensuring that conversation partners treat people with aphasia in a respectful, non-patronising fashion. Techniques for revealing competence are directed towards ensuring that people with aphasia can adequately understand others and have opportunities to express themselves. All allocation arms were administered in a group setting. A standard lecture theatre was utilized for the face-to-face CPT program and scheduled occupational therapy lecture, and a standard computer lab was utilized for the online program. More information on the program can be obtained by contacting the corresponding author.

Outcome measures.

All participants completed two surveys in paper-based form as primary outcome measures: 1) the Aphasia Attitudes, Strategies and Knowledge (AASK) survey based on the aphasia CPT program (Power *et al.*, submitted); and 2) the Interactions with Disabled Persons Scale (IDP) (Gething, 1991). Surveys were administered at two time points: immediately before training (pre-test), and immediately after training (post-test).

Aphasia Attitudes, Strategies and Knowledge (AASK) Survey (Power et al., submitted).

The AASK survey (Appendix 1) was designed to be tailored to the content and learning objectives of SCA™-based aphasia CPT programs through a process of constructive alignment (Biggs, 2014) and examines participants' knowledge of and attitudes towards aphasia. The AASK Survey is divided into four sections: Section 1 measures participants' knowledge of the features of aphasia and its impact on access to healthcare services (assessed using short answer and multiple-choice questions); Section 2 measures participants' knowledge of facilitative communication strategies to use when communicating with a person with aphasia (assessed using short answer and multiple-choice questions); and Section 3 rates participants' levels of comfort and confidence with the prospect of communicating with people without aphasia (part A) and communicating with people with aphasia (part B) (assessed using 5-point Likert-scales, with higher scores representing higher levels of confidence and comfort). The inclusion of parts A and B were designed to provide an opportunity to distinguish between perceptions of communication in health contexts more generally and specific perceptions around communicative interactions specific to aphasia.

The total scores obtainable for each section are as follows: Section 1 (7), Section 2 (10), Section 3 (20; 10 for 3A, 10 for 3B); see Appendix 1 for an itemized scoring key. The 11 questions of the AASK survey result in a total score out of 37, with a greater score equating to increased knowledge of aphasia, knowledge of facilitative strategies, and confidence and comfort communicating with people with and without aphasia.

Psychometric testing has been undertaken for the AASK survey. Inter- and intra-rater reliability scores were calculated using Intraclass Correlation Coefficients (ICC), with high scores for both inter-rater ($r = 0.98$) and intra-rater ($r = 0.99$) reliability. The AASK survey has also been shown to have strong test-retest reliability (Power *et al.*, submitted).

Procedure

Participants allocated to the face-to-face CPT delivery condition received training from a presenter (Author KF; Masters of Speech Language Pathology qualification; 4 years of clinical experience). Participants allocated to the online CPT delivery condition completed training at individual computers in a computer lab at The University of [detail redacted for blinded peer review]. Participants allocated to the control condition received a scheduled 45-50 minute occupational therapy lecture on a different topic relevant to their OT training and undertook the CPT after the study had been completed for their learning. Participants completed the research activities (i.e., survey and demographics) over a period of approximately 1 hour, with the aphasia CPT program in both conditions lasting approximately 45 minutes.

Written information was presented in the two CPT conditions through a PowerPoint platform using multiple modalities including text, audio (either via a presenter or a verbal recording over PowerPoint slides), and video demonstration. Video-based materials and selected text from the SCA™ training were included with permission from the Aphasia Institute to preserve the essential SCA™ elements. Additionally, text and commentary were included to highlight specific communication strategies or processes and provide opportunity for reflection. The videos enabled observation of actual communication-based scenarios with subtitles, with text annotations added to provide context and summarize the key information. Therefore, the training was predominantly didactic but included reflective questioning and passive skill building to support learning (O'Rourke *et al.*, 2018). No handouts or manuals were provided to participants, and no peer discussion took place. Participants were allowed to take notes during their 45-minute session, but all participants

were required to place all materials apart from the two paper-based surveys away during pre- and post-testing periods.

Treatment Fidelity

Although there are some inherent, unavoidable differences between face-to-face and online training (e.g., the presence of an audience during face-to-face training), steps were taken to ensure uniformity of training and treatment fidelity across and within the training conditions. A uniform manualised approach was used to structure the content and its order of delivery in both the face-to-face and online aphasia CPT programs. All text and video, along with commentary provided regarding the videos, was identical in both the face-to-face lecture and the online course, with commentary during the face-to-face lecture provided verbally from a script by the presenter. To maximise treatment fidelity of possible future instances of face-to-face training, an audio recording of the face-to-face training was captured. No adaptations or tailoring of content occurred during the study.

Data Analysis

Data was analysed using the software package SPSS (version 24) (IBM Corp, 2016). As participant sample size was small and not equivalent between the three treatment groups, non-parametric statistics were utilised. Alpha significance was set at $p = 0.05$ to avoid Type II errors in this preliminary research phase, with Bonferroni correction for multiple comparisons. The epsilon-squared (ϵ^2) estimate of effect size is reported (Tomczak and Tomczak, 2014), and interpreted as follows: 0.1 = small; 0.06 = medium, 0.14 = large (Cohen 1988).

To address Aim 1, the non-parametric Kruskal-Wallis H test was used to conduct a between-group comparison by comparing pre-post change scores for the online CPT program with the face-to face CPT program and no CPT program (control) in relation to a)

overall knowledge and attitudes towards aphasia (AASK survey Total), b) knowledge of aphasia (AASK survey Section 1), c) knowledge of facilitative strategies when interacting with people with aphasia (AASK survey Section 2), and d) attitudes towards interacting with a person with aphasia (AASK survey Section 3B).

To address Aim 2, the post-hoc omnibus pairwise comparisons (Dunn-Bonferroni) from the non-parametric Kruskal-Wallis H test (IBM Corp, 2019) were used to compare the i) post and ii) pre-post scores for the online CPT program with the face-to-face program in relation to a) overall knowledge and attitudes towards aphasia (AASK survey Total), b) knowledge of aphasia (AASK survey Section 1), c) knowledge of facilitative communication strategies for interacting with people with aphasia (AASK survey Section 2), and d) attitudes towards people with and without aphasia (AASK survey Section 3 and IDP). The epsilon-squared (ϵ^2) effect size is reported for this test and interpreted as outlined above.

Results

Demographics

There were no significant differences between the online, face-to-face or control groups with regard to age [$\chi^2(2) = .286, p = .867$] or gender (*Fisher's exact test* = 3.870, $p = .471$).

Aim 1

The first aim of this study was to establish whether a CPT program (online and face-to-face) is efficacious when compared to no CPT program. It examined improvements to student healthcare professionals' a) composite knowledge and attitudes towards aphasia (AASK Total), b) knowledge of aphasia (AASK Section 1), c) knowledge of facilitative communication strategies for engaging with people with aphasia (AASK Section 2) and d) attitudes towards people with and without aphasia (AASK Section 3A and 3B). Table 1

presents an overview of the results relating to Aim 1, and figures 2a-d illustrate the pre- to post-assessment comparisons.

Overview of Data

(Insert Table 1 about here)

(Insert Figures 2a-d about here)

Pre-training. There was no significant difference between the online, face-to-face or control groups at the pre-training data point in relation to a) overall knowledge and attitudes towards aphasia [$X^2(2) = .101, p = .951, \epsilon^2 = .003$], b) knowledge of aphasia [$X^2(2) = .224, p = .894, \epsilon^2 = .007$], c) knowledge of facilitative communication strategies for engaging with people with aphasia [$X^2(2) = .282, p = .868, \epsilon^2 = .01$] or d) attitudes towards people with and without aphasia [$X^2(2) = .353, p = .838, \epsilon^2 = .012$].

Pre-post comparisons. Aim 1: Results indicated that the CPT program (online and face-to-face) improved a) overall knowledge and attitudes towards aphasia from pre- to post-training, with a large effect identified (AASK Total) ($X^2(2) = 20.038, p = .000^*, \epsilon^2 = .71$; control vs online: $p = .002^*$, control vs face-to-face: $p = .000^*$). The CPT program (online and face-to-face delivery) also improved b) knowledge of aphasia from pre-post training, additionally with a large effect identified (AASK section 1) ($X^2(2) = 18.570, p = .000^*, \epsilon^2 = .66$; control vs online: $p = .002^*$, control vs face-to-face: $p = .000^*$) and c) knowledge of facilitative communication strategies for engaging with people with aphasia from pre-post training, again with a large effect (AASK section 2) ($X^2(2) = 21.076, p = .000^*, \epsilon^2 = .75$; control vs online: $p = .002^*$, control vs face-to-face: $p = .000^*$).

The CPT program (online and face-to-face delivery) did not result in pre-post training changes with regard to d) attitudes towards people with and without aphasia (AASK Section 3A and 3B) ($X^2(2) = 3.962, p = .138, \epsilon^2 = .14$). However, post-hoc analyses examining

attitudes towards people with aphasia only (specifically AASK Section 3B) indicated that, compared to the control group, both the face-to-face and online CPT groups had significant positive changes in attitudes towards people with aphasia from pre-post training, with further large effect ($X^2(2) = 7.254$, $p = .027^*$, $\epsilon^2 = .25$; control vs online: $p = .031^*$, control vs face-to-face = $.032^*$).

The median difference between the control group and the face-to-face and online CPT groups for *Section 1: Knowledge of aphasia* was a minimum of 3.5 points, reflecting improved ability following CPT to identify two key features of aphasia and improved knowledge of how aphasia can impact on access to healthcare. The median difference between the control group and the CPT groups for *Section 2: Knowledge of facilitative communication strategies for engaging with people with aphasia* was a minimum of 6.5 points, reflecting improved ability following CPT to identify two strategies to acknowledge competence, and four strategies to reveal competence (two strategies to support understanding and two strategies to support expression) when communicating with people with aphasia. The median difference between the control group and the CPT groups for *Section 3B: Attitudes towards people with aphasia* was 1.5 points, reflecting changes either from feeling neutral to feeling comfortable, or a change from feeling unsure to neutral, with regard to the idea of communicating confidently with people with aphasia.

Aim 2: The second aim of the study was to determine if the delivery modality (online versus face-to-face) of an aphasia CPT program results in different outcomes in relation to knowledge of and attitudes towards aphasia (AASK survey Total). Results of the post-hoc pairwise comparisons for the post and pre-post change tests are presented in table 2. There was no significant difference between the online and face-to-face groups in relation to the Total survey score, along with Sections 1-3 of the survey.

(Insert Table 2 about here)

Discussion

The present pilot study investigated the efficacy of an online aphasia CPT program and compared these outcomes with a face-to-face aphasia CPT program or delayed training control delivered to a sample of undergraduate occupational therapy students. This study found that a 45-minute, didactic CPT program (online or face-to-face) improved overall knowledge and attitudes towards aphasia (Total score). The magnitude of the treatment effects that were observed for all sections of the AASK measure (with the exception of the third, regarding attitudes towards people without aphasia) suggest that the program is a clinically worthwhile endeavour and all elements of the program may be valuable in improving SCA-specific knowledge. Moreover, the online CPT delivery mode produced equivalent results to the face-to-face CPT delivery mode. Specifically, the modalities were found to be similarly efficacious in improving a) overall knowledge and attitudes towards aphasia (AASK Total), b) knowledge of aphasia (AASK Section 1), c) knowledge of facilitative communication strategies for engaging with people with aphasia (AASK Section 2) and d) attitudes towards individuals with and without aphasia (AASK Section 3A and 3B). These findings have implications for enhancing the accessibility and efficiency of student education about aphasia and CPT programs in clinical practice. They also have the potential to inform future CPT programs targeting increased awareness about aphasia in the community.

A Brief, SCA™-aligned Communication Partner Training Program can Improve Student Healthcare Professionals' Knowledge of and Attitudes Towards Aphasia

The CPT program delivered in both the online or face-to-face modalities improved overall knowledge and attitudes towards aphasia (Total score) in the sample of student

healthcare professionals. Improvements were observed across the majority of areas surveyed, including knowledge of aphasia and its impact on healthcare (e.g., characteristics of aphasia, the competency of people with aphasia to make healthcare decisions); knowledge of facilitative communication strategies to engage with people with aphasia; and attitudes towards people with aphasia (comfort and confidence in communicating with a person with aphasia). Notably, there was no significant change in attitudes between control and intervention groups towards communicating in healthcare contexts with people without communication difficulties. This finding adds strength that the CPT program, and associated outcomes on the other scales, is likely due to the training itself and not a general increase in comfort with regards to communication more broadly.

Improvements in performance post training reflected observable increases in practice-relevant knowledge. For example, at the pre-training phase, the students were unable to generate any strategies to support a person with aphasia with their understanding of language (part of revealing competence), whereas at the post-training phase, the students could generate a least two relevant specific strategies for this item such as i) speak in short, simple sentences or ii) add gestures, key words, and pictures to your verbal communication. These results are consistent with Simmons-Mackie *et al.* (2016), whose systematic review strongly supported the efficacy of CPT programs for aphasia. Importantly, the present study demonstrated that changes in novice learners' knowledge and attitudes could be achieved with a 45-minute session, in an online format, and without the need for a person with aphasia to be present at the training session as occurred in other studies (Cameron *et al.* 2015). This research is also the first study to report on the efficacy of an SCA™-based CPT program with student healthcare professionals utilizing a self-report

outcome measure that is also aligned with SCA™ and has validated psychometric properties (Power *et al.*, submitted).

Online Delivery of an Aphasia CPT Program is Feasible and Equally Efficacious as Face-To-Face Delivery

This study is one of the first to compare online delivery of an SCA™-based CPT program with face-to-face delivery in a student healthcare professional population and provide support for the use of online CPT delivery. There were no significant differences between online and face-to-face training across the AASK domains, including knowledge about aphasia, facilitative strategies to employ, and attitudes towards people with aphasia. These results extend the findings of Cameron *et al.* (2019) and Heard *et al.* (2017)—who examined online vs face-to-face learning for qualified healthcare professionals—to an educational context incorporating student healthcare professionals. Online delivery addresses potential barriers to providing aphasia CPT to a wide range of possible communication partners. Firstly, online delivery eliminates the need for a presenter to deliver the CPT program face-to-face. Presenters are typically required to be qualified trainers, and may include speech-language pathologists, or a person who has attended several days of training themselves before presenting the CPT program. People with aphasia are often included in CPT, which can be highly advantageous, but may be logistically difficult. Further, CPT has inherent costs, including the cost of the presenter's time and also the time of the staff who attend the training. Online versus face-to-face training programs have reported cost benefits from utilising asynchronous online training modes (Dankbaar *et al.*, 2014). Further investigation of the cost benefits associated with training of staff in communication and potential prevention of adverse events are required (Hemsley *et al.*, 2013). Another benefit of online CPT delivery also eliminates the need for repeated face-to-

face training sessions due to constant staff turnover. Thirdly, an online CPT program can be delivered at any time in any place, which means that groups of staff (or students) are not required to be released from their daily duties at the same time. Additionally, the andragogy of this online training approach fits well within the broader blended learning environment of higher education (Medina, 2018). In summary, the online aphasia CPT program in this study offers an evidence-based alternative to traditional face-to-face CPT. It has the added benefits of cost-effectiveness, time-efficiency and easy accessibility, each of which are priorities for healthcare and educational contexts (see also Irvine *et al.*, 2007).

Clinical Implications and Implementation

There are a number of potential clinical applications for the present findings. Providing CPT to communication partners of people with aphasia is best practice, and recommended in current stroke clinical guidelines (National Stroke Foundation, 2010); (Coutts *et al.*, 2015). This communication partner training should be evidence-based and, if it is to be implemented widely in healthcare contexts, it must address many of the practical and institutional barriers to aphasia CPT mentioned above. Online, modularized CPT programs like the one trialed in this study can meet these requirements. The implementation of an efficacious, cost-effective, time-efficient, and easily-accessible online aphasia CPT program into secondary and tertiary healthcare courses also has the potential to support systemic change through improving student healthcare professionals' education on communication accessibility. This approach may help to prevent the use of incorrect and/or unsafe communication behaviours and habits in the workplace (World Health Organization, 2008), improve adherence to best practice guidelines, and promote accessible communicative environments for people with aphasia. In addition to tertiary education contexts, online training may be of particular benefit for clinical speech pathologists who

aim to incorporate CPT into their everyday practice. Speech pathologists may provide online knowledge-based learning to health professionals to complete independently, while reserving their specialist resources for more complex training (e.g., developing skills to support participation in conversation) and problem solving.

The findings of the present study also reinforce the utility of the AASK survey (Power *et al.*, submitted) as an efficient and well-aligned outcome measure for future SCA™-based CPT programs. This brief questionnaire is the first psychometrically-validated measure of knowledge about aphasia, strategies to use when interacting with a person with aphasia, and attitudes to talking with someone with aphasia. Such a measure requires further testing with other student populations and could easily be incorporated within online training programs in clinical and educational environments.

Limitations and Future Directions

The results of this pilot study provide evidence for the efficacy of a 45-minute SCA™-based CPT program when delivered either online or face-to-face. This study is limited by the lack of follow-up data to monitor maintenance of change over time. In addition, sample sizes within each treatment group were relatively small and uneven. However, the consistently large effect sizes observed suggest that there is value in conducting a future RCT using a larger participant pool to comprehensively investigate the efficacy of this training approach. A future RCT using a larger participant pool is needed to comprehensively investigate the efficacy of this training approach. It is also important that future research continues to focus on training student healthcare professionals from a variety of professional disciplines (e.g., occupational therapy, physiotherapy, nursing, medicine, and social work). The relationship between the changes detected in the present study and actual communication behaviour must also be explored in future research. This is a complex issue

and, although we are confident that changes to knowledge and attitudes are likely to be precursors to positive communication behaviours, it seems likely that some individuals will require further training and support with creating accessible communicative environments in practice. Therefore, a large RCT that encompasses students from a broad range of healthcare disciplines will be able to 1) further investigate the efficacy of the online aphasia CPT program and compare these results with the face-to-face aphasia CPT; 2) expand the outcomes of this pilot study to include measuring not only change in knowledge and attitudes, but also change in skill; and 3) provide clarity around the cost-effectiveness of online CPT compared with face-to-face delivery. These additional outcomes will shed much-needed light on the question of whether the knowledge gained from an aphasia CPT program impacts student healthcare professionals' behaviour when communicating with people with aphasia.

Conclusions

The results of this pilot study show that a brief online aphasia CPT program is an efficacious means of providing CPT for student healthcare professionals that is equally successful in its outcomes when compared to face-to-face delivery. This is the first study to report the efficacy of an online SCA™-based CPT program with student healthcare professionals utilising a self-report outcome measure that is also aligned with SCA™ and has validated psychometric properties (Power *et al.*, submitted). These findings support the use of online CPT for aphasia in clinical and educational contexts. These results also pave the way for a comprehensive RCT study that will further investigate online CPT delivery and will have direct implications for efficient and resourceful training for student healthcare professionals. It is anticipated that this will lead to increased autonomy and improved care for individuals with aphasia.

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References

- BARTLETT, G., BLAIS, R., TAMBLYN, R., CLERMONT, R. J., and MACGIBBON, B., 2008, Impact of patient communication problems on the risk of preventable adverse events in acute care settings. *Canadian Medical Association Journal*, 178, 1555-1562.
- BIGGS, J., 2014, Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1, 5-22.
- CAMERON, A., MCPHAIL, S. M., HUDSON, K., FLEMING, J., LETHLEAN, J., and FINCH, E., 2015, Increasing the confidence and knowledge of occupational therapy and physiotherapy students when communicating with people with aphasia: A pre–post intervention study. *Speech, Language and Hearing Research*, 18, 148-155.
- CAMERON, A., MCPHAIL, S. M., HUDSON, K., FLEMING, J., LETHLEAN, J., and FINCH, E., 2017, A pre-post intervention study investigating the confidence and knowledge of health professionals communicating with people with aphasia in a metropolitan hospital. *Aphasiology*, 31, 359-374.
- CAMERON, A., MCPHAIL, S., HUDSON, K., FLEMING, J., LETHLEAN, J., and FINCH, E., 2019, Telepractice communication partner training for health professionals: A randomised trial. *Journal of Communication Disorders*, 81, 105914.
- CHANG, H. F., POWER, E., O'HALLORAN, R., and FOSTER, A., 2018, Stroke communication partner training: A national survey of 122 clinicians on current practice patterns and perceived implementation barriers and facilitators. *International Journal of Language & Communication Disorders*, 53, 1094–1109.
- COUTTS, S. B., WEIN, T. H., LINDSAY, M. P., BUCK, B., COTE, R., ELLIS, P., FOLEY, N., HILL, M. D., JASPERS, S., and JIN, A. Y., 2015, Canadian Stroke Best Practice Recommendations:

secondary prevention of stroke guidelines, update 2014. *International Journal of Stroke*, 10, 282-289.

COHEN, J., 1988, *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, Nj: Erlbaum.

DANKBAAR, M. E. W., STORM, D. J., TEEUWEN, I. C., and SCHUIT, S. C. E., 2014, A blended design in acute care training: Similar learning results, less training costs compared with a traditional format. *Perspectives on Medical Education*, 3, 289-299.

DOHERTY, M., and LAY, C., 2019, Development of a training program to increase student clinician competency when communicating with people with aphasia. *Journal of Occupational Therapy Education*, 3.

FINCH, E., CAMERON, A., FLEMING, J., LETHLEAN, J., HUDSON, K., and MCPHAIL, S., 2017, Does communication partner training improve the conversation skills of speech-language pathology students when interacting with people with aphasia? *Journal of Communication Disorders*, 68, 1-9.

GETHING, L., 1991, *Interaction with Disabled Persons' Scale: Manual and kit*, Sydney, University of Sydney.

HEARD, R., O'HALLORAN, R., and MCKINLEY, K., 2017, Communication partner training for health care professionals in an inpatient rehabilitation setting: A parallel randomised trial. *International Journal of Speech-Language Pathology*, 19, 277-286.

HEMSLEY, B., WERNINCK, M., and WORRALL, L., 2013, "That really shouldn't have happened": People with aphasia and their spouses narrate adverse events in hospital. *Aphasiology*, 27, 706-722.

- HORTON, S., LANE, K, and SHIGGINS, C., 2015, Supporting communication for people with aphasia in stroke rehabilitation: transfer of training in a multidisciplinary stroke team. *Aphasiology*, 30, 629-656.
- IBM CORP, 2016, IBM SPSS Statistics for Windows. 24.0 ed. Armonk, NY: IBM Corp.
- IBM CORP, 2019, Post hoc comparisons for the Kruskal-Wallis test [Online]. Available: <https://www-01.ibm.com/support/docview.wss?uid=swg21477370> [Accessed 6th February 2019].
- IRVINE, A. B., BOURGEOIS, M., BILLOW, M., and SEELEY, J. R., 2007, Internet training for nurse aides to prevent resident aggression. *Journal of the American Medical Directors Association*, 8, 519-526.
- JENSEN, L. R., LØVHOLT, A. P., SØRENSEN, I. R., BLÜDNIKOW, A. M., IVERSEN, H. K., HOUGAARD, A., MATHIESEN, L. L., and FORCHHAMMER, H. B., 2015, Implementation of supported conversation for communication between nursing staff and in-hospital patients with aphasia. *Aphasiology*, 29, 57-80.
- KAGAN, A., 1998, Supported conversation for adults with aphasia: methods and resources for training conversation partners. *Aphasiology*, 12, 816-830.
- KAGAN, A., BLACK, S. E., DUCHAN, J. F., SIMMONS-MACKIE, N., and SQUARE, P., 2001, Training volunteers as conversation partners using "supported conversation for adults with aphasia" (SCA): A controlled trial. *Journal of Speech, Language, and Hearing Research*, 44, 624-38.
- KAGAN, A., WINCKEL, J., BLACK, S., FELSON DUCHAN, J., SIMMONS-MACKIE, N., and SQUARE, P., 2004., A set of observational measures for rating support and participation in conversation between adults with aphasia and their conversation partners. *Topics in Stroke Rehabilitation*, 11, 67-83.

- LEGG, C., YOUNG, L., and BRYER, A., 2005, Training sixth-year medical students in obtaining case-history information from adults with aphasia. *Aphasiology*, 19, 559-575.
- MALONEY, S., HAAS, R., KEATING, J. L., MOLLOY, E., JOLLY, B., SIMS, J., MORGAN, P., and HAINES, T., 2011, Effectiveness of web-based versus face-to-face delivery of education in prescription of falls-prevention exercise to health professionals: randomized trial. *Journal of Medical Internet Research*, 13, e116.
- MCKINLEY, K., and O'HALLORAN, R., 2016, Communication partner training for nurses: A pilot study of an online learning program. *Journal of Clinical Practice in Speech-Language Pathology*, 18, 89-93.
- MEDINA, L. C., 2018., Blended learning: Deficits and prospects in higher education. *Australasian Journal of Educational Technology*, 34, 42–56.
- MISCH, D., 2002, Andragogy and medical education: Are medical students internally motivated to learn? *Advances in Health Sciences Education*, 7, 153-160.
- NATIONAL STROKE FOUNDATION, 2010, Clinical guidelines for stroke management. Melbourne, Australia.
- O'HALLORAN, R., GROHN, B., and WORRALL, L. E., 2012, Environmental factors that influence communication for patients with a communication disability in acute hospital stroke units. *Archives of Physical Medicine and Rehabilitation*, 93(Suppl 1), S77–S85.
- O'ROURKE, A., POWER, E., O'HALLORAN, R., and RIETDIJK, R., 2018, Common and distinct components of communication partner training programmes in stroke, traumatic brain injury and dementia. *International Journal of Language & Communication Disorders*, 53, 1150-1168.

POWER, E., FALKENBERG, K., ELBOURN, E., ATTARD, M., and TOGHER, L., submitted. The test-retest reliability of the Aphasia Attitudes, Strategies and Knowledge (AASK) survey. *Aphasiology*.

ROSENTHAL, J., 1996, Qualitative descriptors of strength of association and effect size. *Journal of Social Service Research*, 21, 37-59.

SIMMONS-MACKIE, N., KEARNS, K., and POTECHIN, G., 2005, Treatment of aphasia through family member training. *Aphasiology*, 19, 583-593.

SIMMONS-MACKIE, N., RAYMER, A., ARMSTRONG, E., HOLLAND, A., and CHERNEY, L. R., 2010, Communication partner training in aphasia: A systematic review. *Archives of Physical Medicine and Rehabilitation*, 91, 1814-1837.

SIMMONS-MACKIE, N., RAYMER, A., and CHERNEY, L. R., 2016, Communication partner training in aphasia: An updated systematic review. *Archives of Physical Medicine and Rehabilitation*, 97, 2202-21.

SIMMONS-MACKIE, N. N., KAGAN, A., O'NEILL CHRISTIE, C., HUIJBREGTS, M., MCEWEN, S., and WILLEMS, J., 2007, Communicative access and decision making for people with aphasia: Implementing sustainable healthcare systems change. *Aphasiology*, 21, 39-66.

TOMCZAK, M., and TOMCZAK, E., 2014, The need to report effect size estimates revisited. An overview of some recommended measures of effect size. *Trends in Sport Sciences*, 1, 19-25.

VAN RIJSSEN, M., VELDKAMP, M., MEILOF, L., and VAN EWIJK, L., 2018, Feasibility of a communication program: improving communication between nurses and persons with aphasia in a peripheral hospital. *Aphasiology*, 33, 1393-1409.

WELSH, J. D., and SZABO, G. B., 2011, Teaching nursing assistant students about aphasia and communication. *Seminars in Speech and Language*, 243-255.

WORLD HEALTH ORGANIZATION, 2008. World alliance for patient safety progress report 2006-2007. Geneva: World Health Organization.

WORLD HEALTH ORGANIZATION, 2011. International classification of functioning, disability and health (ICF); 2001. Geneva: World Health Organization.

Tables

Table 1. AASK outcomes and results from Kruskal-Wallis H tests

AASK	Data Point	Group [Median (Interquartile Range)]			Kruskal-Wallis H (K-W)	Pre-Post Median, Change (K-W)
		Control	Face-to-face	Online		
Total	Pre	12.5 (7.5-17.5)	13 (10.5-15.5)	13 (11-14)	$X^2(2) = .101$, $p = .951$, $\epsilon^2 = .003$	9, $X^2(2) = 20.038$, $p < .001^*$, $\epsilon^2 = .71$
	Post	15.5 (13.5-18.5)	27 (23-31)	25 (22-28)	$X^2(2) = 19.664$, $p < .001^*$, $\epsilon^2 = .7$	
Section 1: Knowledge of aphasia	Pre	1 (0-2)	1 (0-2)	0 (0-1.5)	$X^2(2) = .224$, $p = .894$, $\epsilon^2 = .007$	1.5, $X^2(2) = 18.570$, $p < .001^*$, $\epsilon^2 = .66$
	Post	.5 (0-1)	5 (4.5-6.5)	4 (2-3)	$X^2(2) = 19.957$, $p < .001^*$, $\epsilon^2 = .71$	
Section 2: Facilitative strategies	Pre	0 (0-.5)	0 (0-.5)	0 (0)	$X^2(2) = .282$, $p = .868$, $\epsilon^2 = .01$	4, $X^2(2) = 21.076$, $p < .001^*$, $\epsilon^2 = .75$
	Post	.5 (0-1.5)	8.5 (7.5-9.5)	7 (5.5-8.5)	$X^2(2) = 22.702$, $p < .001^*$, $\epsilon^2 = .81$	
Section 3A and 3B: Aphasia attitudes ¹	Pre	11.5 (7.5-15.5)	11.5 (10-13)	10 (8.5-11.5)	$X^2(2) = .353$, $p = .838$, $\epsilon^2 = .01$	2, $X^2(2) = 3.962$, $p = .138$, $\epsilon^2 = .14$
	Post	13 (10.5-15.5)	14.5 (14-15)	14 (12-16)	$X^2(2) = 1.312$, $p = .519$, $\epsilon^2 = .04$	

* Significant result, ¹ Completed additional post hoc analysis of Aphasia Attitudes, Strategies and Knowledge (AASK) section 3B: Attitudes towards aphasia (Pre: [$X^2(2) = .849$, $p = .654$, $\epsilon^2 = .03$], Post: [$X^2(2) = 2.474$, $p = .290$, $\epsilon^2 = .08$], Pre-Post: [$X^2(2) = 7.254$, $p = .027^*$, $\epsilon^2 = .25$].

Table 2. Post-hoc pairwise comparisons (Kruskal-Wallis H Dunn's Test Statistic).

Aim, AASK Section	Online vs face-to-face:		Control vs Online:		Control vs face-to-face:	
	Post	Pre-Post	Post	Pre-Post	Post	Pre-post
1.a. AASK Total (Overall knowledge and attitudes towards aphasia)	2.58 p = 1.000 $\epsilon^2 = .09$	2.88 p = 1.000 $\epsilon^2 = .1$	-12.86 p = .002* $\epsilon^2 = -.63$	-12.79 p = .002* $\epsilon^2 = -.63$	-15.44 p < .001* $\epsilon^2 = -.82$	-15.67 p < .001* $\epsilon^2 = -.83$
1.b. AASK Section 1: Knowledge of aphasia	.950 p = 1.000 $\epsilon^2 = 0$	2.36 p = 1.000 $\epsilon^2 = .08$	-13.88 p < .001*, $\epsilon^2 = -.68$	-12.70 p = .002* $\epsilon^2 = -.62$	-14.83 p < .001* $\epsilon^2 = -.79$	-15.06 p < .001* $\epsilon^2 = -.8$
1.c. AASK Section 2: Facilitative strategies	4.95 p = .695 $\epsilon^2 = 0.22$	4.13 p = .958 $\epsilon^2 = .17$	-12.80 p = .002* $\epsilon^2 = -.63$	-16.88 p = .002* $\epsilon^2 = -.81$	-17.75 p < .001* $\epsilon^2 = -.94$	-16.88 p < .001* $\epsilon^2 = -.89$
1.d ¹ . AASK Section 3B: Aphasia attitudes	N/A	.29 p = 1.000 $\epsilon^2 = -.04$	N/A	-9.46 p = .031* $\epsilon^2 = -.48$	N/A	-9.75 p = .032* $\epsilon^2 = -.54$

* Significant result with Bonferroni adjustment, ¹ Additional post-hoc analysis

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Figure 2.d. Difference in pre- and post-test scores attitudes towards aphasia (AASK Section 3B)

Appendix 1

Aphasia Attitudes, Strategies and Knowledge (AASK) survey.

INSTRUCTIONS

This survey will provide us with information on your knowledge of aphasia. It has three sections. Please respond to each question in each section. Please tick the boxes provided to indicate your answer(s) to multiple choice questions.

SECTION ONE: Knowledge of Aphasia

Q 1.1. Please identify the FOUR KEY FEATURES of aphasia. If you are unsure, tick “Unsure”.

- Unsure **Feature 1:** _____
 Unsure **Feature 2:** _____
 Unsure **Feature 3:** _____
 Unsure **Feature 4:** _____

Q 1.2. Which of the following IS a characteristic feature of aphasia?

- a) Motor problems
 b) Attention problems
 c) Dementia
 d) None of the above
 e) Unsure

Q 1.3. Which of the following statements are TRUE?

- a) Healthcare professionals can have difficulty gathering information from people with aphasia
- b) People with aphasia are competent to make healthcare decisions independently
- c) People with aphasia are unable to make healthcare decisions without their family present
- d) Two of the above
- e) Unsure

Q 1.4. Healthcare professionals - like doctors, nurses, physiotherapists, etc. - can HELP people with aphasia participate in healthcare activities by:

- a) Using interpreters

- b) Ensuring that information is presented in an “accessible” way
- c) Ensuring that family members are present during consultations
- d) None of the above
- e) Unsure

SECTION TWO: Communication Strategies

Q 2.1 List THREE strategies that you can use to ACKNOWLEDGE the competence of a person with aphasia, and show that you respect their condition. If you are unsure, tick “Unsure”.

- Unsure 1: _____
- Unsure 2: _____
- Unsure 3: _____

Q 2.2. List THREE strategies that you can use to ensure a person with aphasia UNDERSTANDS what you are saying to them i.e. strategies to get your information IN. If you are unsure, tick “Unsure”.

- Unsure 1: _____
- Unsure 2: _____
- Unsure 3: _____

Q 2.3. List FOUR strategies that you can use to ensure a person with aphasia can adequately EXPRESS themselves i.e. strategies to get their information OUT. If you are unsure, tick “Unsure”.

- Unsure 1: _____
- Unsure 2: _____
- Unsure 3: _____
- Unsure 4: _____

SECTION THREE: Attitudes

Part A

Q 3.1. You are working at a hospital. Your supervisor asks you to gather a case history from a patient without any communication problems. How comfortable are you with completing this task?

1. Very uncomfortable	2. Uncomfortable	3. Neutral	4. Comfortable	5. Very comfortable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q 3.2. How confident are you that you will be able to communicate successfully with this same patient?

1. Very unsure	2. Unsure	3. Neutral	4. Sure	5. Very sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 3B

Q 3.3. You are working at a hospital. Your supervisor asks you to gather a case history from a patient who can't speak and can't understand you. How comfortable are you with completing this task?

1. Very uncomfortable	2. Uncomfortable	3. Neutral	4. Comfortable	5. Very comfortable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q 3.4. How confident are you that you will be able to communicate successfully with this same patient?

1. Very unsure	2. Unsure	3. Neutral	4. Sure	5. Very sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AASK scoring key

Item #	Max. possible score
AASK Survey Total	37
1.1	4
1.2	1
1.3	1
1.4	1
Section 1 total	5
2.1	3
2.2	3
2.3	4
Section 2 total	10
3.1	5
3.2	5
3.3	5

3.4	5
Section 3 total	20
