Counselling education for speech-language pathology students in Australia: A survey of education in post-stroke aphasia

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Abstract

Background: Speech-language pathology practice guidelines recommend competency in counselling to support psychological adjustment and wellbeing in people with communication disability. However, there is limited information about what counselling education speech-language pathology students need or receive to attain this competency. Speech-language pathologists report that they frequently use counselling to support psychological wellbeing in people with post-stroke aphasia, a patient group particularly vulnerable to mood disorders, but they also report low knowledge, skill, and confidence in this practice. We aimed to describe the content, methods, duration, and evaluation of counselling education currently offered to Australian speech-language pathology students, including education specifically aimed at supporting the psychological wellbeing of people with post-stroke aphasia.

Methods & Procedures: Directors of all accredited speech-language pathology programs (N=21) across 15 eligible Australian Universities were invited to participate in an online survey.

Outcomes & Results: Responses from 12 of the 21 eligible (57%) programs were obtained. Ten programs (83%) reported offering counselling education with four programs (33%) offering this specifically for people affected by post-stroke aphasia. Most programs provided over 10 hours of counselling coursework but provided less than 3 hours of counselling observation and practicum. Teaching on a variety of counselling topics was reported, most commonly general principles of counselling, while specific approaches included motivational interviewing and cognitive behavioural therapy. Counselling was taught using a range of methods, most frequently problem based learning and role play. Student counselling knowledge, skills and competence were evaluated by written assignment, review of video/written transcripts of role play, oral presentation, and problem-based learning (case studies) group discussion. Academics had mixed opinions on graduate competency for counselling.

Conclusions: While the majority of University programs reported providing counselling education, few offered education to support the psychological needs of people specifically affected by post-stroke aphasia. Some courses offered no counselling education. Minimum standards of counselling education for speech-language pathology students are required to ensure graduates are competent to provide counselling to support adjustment and wellbeing in people with communication disabilities.

Running head: Student counselling education in aphasia

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Introduction

Counselling is important in speech-language pathology.

In Australia, speech-language pathology qualifications are gained through undergraduate (Bachelors) or post-graduate (Masters) courses at universities accredited by the professional body, Speech Pathology Australia (SPA) (SPA, 2018). Both types of programs are considered equivalent by SPA in providing education for speech-language pathology qualifications. A Code of Ethics and guidelines produced by SPA ensure speech-language pathologists are competent to meet the communication and swallowing needs of clients safely and effectively within specific work roles and contexts. Skills in counselling are required as a professional standard for speech-language pathologists in many countries including Australia (SPA, 2020) and USA ([American Speech-Language Hearing Association [ASHA], 2016). Counselling in speech-language pathology is defined by professional bodies, academics and researchers in the field of communication disorders as providing education, guidance, and support to the individual, their families and caregivers to help them deal with specific needs or problems relating to communication and swallowing

disabilities (ASHA, 2016; Kaderavek, Laux & Mills, 2004; Parkinson & Rae, 1996; Stone & Olswang; 1989; Victorino & Hinkle, 2019). Counselling processes include both the general working (therapeutic) relationship that underlies all clinical service activities, and interactions designed to deal with emotional reactions, thoughts, feelings, and behaviours that result from living with communication and swallowing disabilities (Kaderavek et. al., 2004; Parkinson & Rae, 1996).

Standards for counselling education

There is international consensus that counselling education should be included in speech-language pathology student education (Culpepper, Lucks Mendel, & McCarthy, 1994; McCarthy, Culpepper & Lucks, 1986; Doud, Hoepner, & Holland, 2020; International Association Of Logopedics And Phoniatrics Education Committee (IALP), IALP, 2010). Students are expected to gain appropriate and adequate clinical and professional knowledge, skills, and behaviours, including counselling, through practicums under the supervision of appropriately qualified educators (Atkins, 2007; Culpepper et al., 1994; Hilliard, 2012; IALP, 2010; Kim, 2012; Margolis, 2011; McCarthy et al., 1986;-Rosenberg, 1998; SPA, 2020).

Cross sectional surveys of counselling education in accredited communication disorders courses in the USA found that student counselling education and experience was variable (Doud et al., 2020; Culpepper et al., 1994; McCarthy et al., 1986). Approximately 23% of the communication disorders courses in the USA did not offer counselling education to speech-language pathology students (Culpepper et al., 1994; McCarthy et al., 1986). Further, Culpepper et al., (1994) and McCarthy et al., (1986) found that a majority of counselling courses (67%) were electives, therefore enabling students who did not elect to take a counselling course to graduate without the essential knowledge, skills or competency for counselling.

A range of student counselling learning outcomes were described across the courses included in the Doud et al. (2020) survey including ethics, the role of the speech-language pathologist/audiologist, counselling fundamentals, interprofessional practice, self-reflection/assessment, diversity, psychosocial adjustment, educational counselling, and working with families. Counselling approaches taught included motivational interviewing, solution focused therapy, cognitive behavioural therapy, and positive psychology. The evaluation of counselling education for student speech-language pathologists includes student's self-ratings of confidence (Beck & Verticchio, 2014) and preparedness for counselling (Phillips & Lucks Mendel, 2008), peer and supervisor evaluation using validated outcome measures (Hilliard, 2012; Kaderavek, Laux, & Mills, 2004), academic opinion of competency (Culpepper et al., 1994; McCarthy et al., 1986), and client report of skills for building therapeutic alliance (Hilliard, 2012; Kaplan & Dreyer, 1974). Validated tools such as the Counselor Rating Form (Barak & LaCrosse, 1975), a 36-item rating scale of adjectives and their antonym (e.g., confident and unsure) and counselling interaction checklists adapted from validated counselling tools including the Counsellor Interview Rating Scale (Russell-Chapin & Sherman, 2000) and Counselor Interview Rating Form (Borders, & Leddick (1987) have been used to evaluate speech-language pathology student counselling competency. More recently, Victorino & Hinkle (2019) aimed to develop a survey tool to measure counselling self-efficacy in speech-language pathologists and students based on the Counselor Activity Self-Efficacy Scales (CASES) by Lent, Hill, & Hoffman (2003).

Significant positive changes in students' self-perceived counselling knowledge, skills, attitudes, and confidence are reported after counselling education (Beck & Verticchio, 2014; Hilliard, 2012; Kaderavek et. al, 2004; Phillips & Lucks Mendel, 2008). Although some academics reported benefitting from providing counselling education to students, they had limited formal counselling education themselves (Hilliard, 2012). Less than 20% of surveyed

academics felt that graduates in communication disorder programs were adequately prepared to meet the counselling needs of their clients (Culpepper et al., 1994; McCarthy, et al., 1986). It is unknown if the evaluation of student counselling competency is related to the academic's own formal counselling education, and experience.

Counselling education should be relevant, applicable, and practical to communication disability and specific client populations

Education guidelines for initial speech-language pathology qualifications, (IALP, 2010) recommended students receive education, including in counselling, with direct practical experience under the supervision of qualified and experienced speech-language pathologists with a variety of types of clients and settings. At a minimum, it is recommended that students receive direct experience in a clinical practicum with developmental and acquired speech and language disorders in adults and children, voice disorders, fluency disorders, reading and writing disorders and swallowing disorders (IALP, 2010).

Counselling education should be relevant, practical, and useful for working with individuals with specific communication disorders and should be provided within communication disorders programs (McCarthy et al., 1986). For counselling to be effective, speech-language pathologists require a deep understanding of the nature of the communication or swallowing disability, including the lived experience of those affected by the disability (Glista & Pollens, 2007; Holland, 2007; Shames, 2006). In a recent survey of student counselling education in communication disorders curricula in the USA, approximately 50% of respondents reported that counselling education was indeed embedded in disorder specific coursework (Doud et al, 2020).

Historical studies from the USA reported that 59% of communication disorders courses offered education for counselling people with neurogenic disorders, (Culpepper et al., 1994; McCarthy et al., 1986). There is, however, a lack of detailed information in this area.

Two recent reviews found little research detailing counselling education topics, amount of coursework and practicum, education format, and competency evaluation of counselling education for student speech language pathologist. Further, there was no information about counselling education for student speech-language pathologists in Australia (Doud et al., 2020; Sekhon, Oates, Kneebone & Rose, 2019).

Student education should include counselling for supporting psychological wellbeing in people affected by post-stroke aphasia

Stroke is a common, serious and disabling global health-care problem and one of the main causes of acquired adult disability (Langhorne, Bernhardt, & Kwakkel, 2011). Approximately 30% of stroke survivors have aphasia which is a language impairment resulting in communication disability (Engelter et al., 2006). Stroke rehabilitation is a holistic, person-centred, and goal orientated process that aims to bring about the highest possible function and participation, with the best possible quality of life (Stroke Foundation, 2019). Speech-language pathologists are important members of the stroke team as post-stroke aphasia requires speech-language pathology assessment and management (González-Fernández, Brodsky, & Palmer, 2015). Speech-language pathologists working in the health sector report that people affected by post-stroke aphasia make up approximately half (50%) of their caseload in subacute inpatient, outpatient, and community rehabilitation health services (Rose, Ferguson, Power, Togher, & Worrall, 2014).

People affected by post-stroke aphasia suffer significant psychological distress and are vulnerable to mood disorders (Hilari, Needle & Harrison, 2012). Psychological wellbeing is therefore an important stroke rehabilitation goal (Gilham & Clarke, 2011). Along with other members of the stroke rehabilitation team speech-language pathologists have a role in supporting this well-being including via counselling (Gilham & Clarke, 2011; Harrison, Ryan, Gardiner, & Jones; 2017; Kneebone, 2016). Australian (N=111) and British (N=124)

speech-language pathologists, reported frequently providing counselling to support psychological wellbeing with this client group but they also reported low knowledge, confidence, satisfaction, and skills to do so, with a majority citing limited pre-qualification education to enable counselling practice (Northcott, Simpson, Moss, Ahmed, & Hilari, 2018; Sekhon, Douglas, & Rose, 2015).

In summary, while counselling education is considered essential to speech-language pathology professional practice, there is variability in the provision of this education and little description of how students learn to support adjustment and enhance quality of life in post-stroke aphasia rehabilitation. Speech-language pathology students require competency in counselling people affected by post-stroke aphasia, a group who suffer high frequency of distress and risk of mood disorders. To our knowledge, there is no published literature detailing the counselling education that Australian speech-language pathology students receive to enable them to competently support the psychological wellbeing of people affected by post-stroke aphasia.

Aims and research questions.

The aim of this study was to describe the counselling education that speech-language pathology students in Australia receive to work with people affected by communication disability and in particular for working with people affected by post-stroke aphasia. Specifically, we wanted to:

- Ascertain whether counselling education is included in speech-language pathology courses in Australia, and whether this is specific to people with post-stroke aphasia
- Describe the hours, topics and format of counselling education generally and specifically for post-stroke aphasia

- Determine how the counselling competency of speech-language pathology students is evaluated
- Ascertain the opinions of academics as to their graduates' competence for counselling clients with communication disability and people affected by post-stroke aphasia.

Materials and Methods

A cross sectional, descriptive survey methodology was used to gather data. The Checklist for Reporting Results of Internet E-Surveys (CHERRIES checklist) guided the study (Eysenbach, 2004) (Appendix A). A survey tool consisting of 17 closed questions and one open question, requiring approximately 20 minutes to complete, was developed based on previous surveys of counselling education in communication disorders in the USA and literature for counselling in post-stroke aphasia (Culpepper et al., 1994; Glista & Pollen, 2007; McCarthy, et al., 1986; Philip & Lucks Mendel, 2008; Simmons Mackie & Damico, 2011; Stone & Olswang, 1989). Consent was required but all other questions were optional. Participants who did not wish to participate or who wished to discontinue could exit the survey at any time. Instructions (with examples where required) on how to complete the items of the survey were provided. Several questions were set to display following selection of specific response choices for previous questions. The display logic is provided in the final full survey in Appendix B.

One academic from the three speech-language pathology programs in New Zealand universities agreed to pilot the survey (on Qualtrics) and provided suggestions for minor amendments including improving grammar, formatting, and reducing ambiguity which were incorporated into the revised survey tool. New Zealand is a country close in cultural and linguistic background to Australia but where academics would not be eligible to participate in the proposed study.

Questions in the survey were designed to determine:

- Location of the university
- Speech-language pathology course structure, for example, Bachelors, Masters or Combined degree
- Respondent's educational role in training speech pathology students.
- Respondent's qualifications to provide counselling training.
- If assessment and management of post-stroke aphasia is taught at the university.
- If respondents think counselling is essential to speech-language pathology qualifications.
- If counselling training is taught at the university.
- Respondents' opinion as to why counselling training is not provided to the speech pathology students at the university (if relevant)
- If counselling training is a prerequisite or an option for speech-language pathology qualifications.
- If the university provides counselling training specifically for people affected by post-stroke aphasia.
- Information about the amount of observational, contact and practicum hours of counselling training, theoretical content, method of counselling training, and evaluations of counselling training for speech pathology students including for working with people affected by post-stroke aphasia.
- Respondent's opinion whether speech-language pathologists are competent in counselling people affected by post-stroke aphasia on graduation.

The final question was an optional open question inviting any comments regarding the content of the questionnaire. Questions aimed to be tactful and non-judgemental in tone thereby encouraging honest answers. "Opt out" responses were made available for potentially

identifying questions for example, question 1 where participants could choose not to say where their university was located, and questions 9 and 10 with a response option 'I am not sure'. Definitions for the terms "people affected by post-stroke aphasia", "counselling", "education", and "psychological wellbeing" were provided. Ethics approval (reference HEC18360) for this study was granted by the College Human Ethics Sub-Committee – Science, Health and Engineering (CHESC SHE) of La Trobe University.

Participants

Course directors of all 21 accredited speech-language pathology programs across 15 eligible Australian universities were invited to participate. The names and email addresses of course directors for speech-language pathology courses at eligible universities were identified via the relevant university websites. At the time of the study institutions in five states (out of six states and two territories) in Australia offered speech-language pathology education; New South Wales, South Australia, Queensland, Victoria, and Western Australia. Fifteen accredited Australian universities (SPA, 2018) offered 21 speech-language pathology programs (via 11 Bachelors and/or 9 Masters level course). Two universities, University of Canberra and University of Technology Sydney, were not eligible to participate as both had new programs that were yet to achieve accreditation at the time of the survey. Selection bias was further controlled for by prescribing eligibility criteria for the academic respondent(s). Eligible participants included:

- Academics who provide education to speech-language pathology students
- Academics involved in teaching counselling or neurogenic communication disorders or aphasia after stroke to speech-language pathology students
- Heads of the speech-language pathology program at the university.

Administration of the survey

A link to the online survey using the Qualtrics XM platform (2018), was sent to senior academics (program coordinators or discipline leaders). The contact academic was encouraged to forward the participant information statement and anonymous survey link embedded in the email invitation to the most suitable academic involved in the education of speech-language pathology students in counselling for working in post-stroke aphasia at their university. One survey response for each speech-language pathology program at each university was required (total possible n=21). Responses were not required from multiple campuses of a university. Discussion between the academics who were eligible to participate, for example from different campuses, was encouraged as stated in the instructions.

The survey was open for six weeks (29 October 2018 to 14 December 2018) during the teaching semester when it was likely the target participants were available. A reminder email was sent after the initial invitation to participate, at two weeks, four weeks and five weeks. In addition, the study was advertised at a national Heads of Speech Pathology Department meeting mid-way of the survey. Further information regarding the project was provided if requested. This occurred in three instances.

Data analysis

Raw data was exported using Qualtrics XM software (2018) into a Microsoft Excel spreadsheet. Descriptive statistics including frequency counts (and percentages) and cross tabulations for multiple response sets were performed. Statistical analysis of the relationship between the provision of counselling education and respondent's perception of counselling competence in speech-language pathology graduates was not appropriate due to low power with the small sample size (Portney & Watkins, 2000).

Results

Respondent roles and qualifications

The respondents taught students in a) counselling (n=6); b) aphasia (n=8), c) communication disorders of neurological origin (n=9), and d) psychology (n=2). Text responses (n=3) described "other" roles including 1) course convenor; 2) course coordinator and, 3) research. Of the six respondents who taught students in counselling, two reported no formal qualifications to provide counselling education while four reported counselling qualifications. One of the two respondents who reported having no formal counselling qualifications described attending short courses related to speech-language pathology and counselling and having received mentoring from qualified counselling professionals working in the same university. The four respondents with formal counselling qualifications listed qualifications including a) speech-language pathology qualifications (n=1), b) Masters and PhD in Psychology (n=1); and Foundation Certificate in Counselling and Psychotherapy (n=2).

Counselling education offered to Australian speech-language pathology students

Responses were received from universities in all five Australian states offering speech-language pathology programs. Twelve surveys representing twelve different speech-language pathology programs (of a possible 21) were completed resulting in a 57% response rate. Counselling education was provided in Bachelors (n=8), Masters (n=3) and combined Bachelors/Masters (n=1) programs.

All respondents but one (n=11) considered counselling education to be essential to speech-language pathology qualifications. Seven of the twelve respondents (58%) reported that counselling education was provided at their university and was a prerequisite for attaining speech-language pathology qualifications. Three of the five respondents (n=2 from Bachelors programs and n=1 from a Masters program) who reported that counselling education was *not* provided at their university, commented in free text that counselling education was not offered as a separate course but was embedded within the speech-language

pathology curricula. One academic commented (in free text) that "teaching it (counselling) separately so students can learn the various frameworks etc. would be more ideal". Comments from these three respondents indicated that it may have been unclear if we were asking about stand-alone counselling courses or counselling courses embedded into the speech-language pathology curriculum or both. We therefore considered the three responses denying that counselling education was taught but reporting embedded counselling as affirmative responses and these were added to the count of universities reporting counselling education. Thus, we report that counselling education was offered in ten of the twelve speech-language pathology programs (83%).

All speech-language pathology programs offered education for working with people with post-stroke aphasia including assessing and managing aphasia (n=12). However, only four programs reported providing students with counselling education specific to supporting psychological wellbeing in post-stroke aphasia. One reason offered as to why counselling was not taught was a lack of time within the program (n=3). Some respondents indicated that counselling education may occur in clinical practicums/placements external to universities, but that this was not formally documented and therefore difficult to describe.

Participant views on competency

Question 16 sought the respondent's opinion about student counselling competency for supporting the psychological wellbeing of people affected by post-stroke aphasia and was only displayed to respondents who indicated that counselling education was offered at their university (n=7). There was variation in the respondents' opinions about graduate counselling competency. Of these seven respondents, three (43%) felt students were competent to counsel people affected by post-stroke aphasia, two reported students were not competent, and two were unsure. One respondent commented that students are competent to employ core counselling skills to understand psychological wellbeing in people affected by post-stroke

aphasia and are taught to refer to or work with people with additional skills or expertise as appropriate. Table 1 provides details of academic qualification for providing counselling education and academics' opinion of student competency for counselling on graduation.

(Table 1 here)

Three respondents volunteered text responses in the final open question. These comments were:

"Yes, I think counselling education is incredibly important to help students realise how counselling employs specific and deliberate techniques and is more than simply engaging in an interaction with someone who is 'worse off'".

"We offer a full unit on counselling in third year. We also talk about counselling skills in several other units. The focus on post stroke aphasia is for one three-hour session within the counselling unit - but that, again, comes up in other units, for example, in preparation for a visit to a stroke group, in our unit on the principles underpinning intervention, and in relation to practicum units".

"They are taught about approaches such as CBT and family therapy and advised that they will need further education to actively use these technique".

Hours of counselling education

Respondents were asked to estimate the number of hours of counselling education for working as a speech-language pathologist and in post-stroke aphasia offered within the university, excluding counselling education while on external clinical placements. Data were collected from seven respondents, including those respondents who may have reported no specific counselling education for working in post-stroke aphasia. Most courses (n=7 courses) provided over ten hours of counselling coursework, with fewer courses providing less than 3 hours of counselling observation (n=5 courses) and counselling practicum (n=4 courses) for working as a speech-language pathologist. For working in post-stroke aphasia,

the majority of courses provided less than 3 hours of counselling observation (n=6 courses), counselling practicum (n=6 courses) and counselling coursework (n=4 courses) within the university. Figure 1 displays the hours of counselling education provided by program types.

(Figure 1 here)

Topics of counselling education

Figure 2 shows the range and frequency of topics taught in counselling education in speech-language pathology programs. The most frequently selected counselling topic across Bachelors programs was general principles of counselling, counselling theories and approaches, and communicating bad news. Frequently selected counselling topics across Masters programs were general principles of counselling, professional self-care, communicating bad news and interpersonal skills for building effective client-clinician relationships as topics taught in counselling education. No course offered education for "group counselling" and only one offered family therapy. A text box was provided (in question 11) for respondents to describe counselling approaches offered at the university. Respondents (n=3) described providing education in basic counselling skills such as micro-skills and psychological approaches including cognitive behavioural therapy, motivational interviewing, family therapy and coaching. Respondents listed textbook/references (Holland, 2007; Flasher & Fogle, 2012) and supplementary materials, for example, a course in "mental health first aid" in the text box describing counselling topics taught. One comment indicated that students are taught about the limitations of the amount of education and that further education would be required (on graduation) to actively use the techniques in practice.

(Figure 2 here)

Methods of teaching

A range of methods were selected with use of role play, case discussion (problem-based learning) and group discussions the most frequently reported by Bachelors and Masters

courses. None of the courses provide students with opportunities to practice counselling skills with a real client however, three programs provided practice with simulated clients within the university. Figure 3 shows the range and frequency of methods of counselling education.

(Figure 3 here)

Evaluation of counselling education (method and outcome tools)

Counselling education was evaluated using a range of methods, but most commonly evaluated using written assessment in Bachelors programs and oral presentations in Masters programs. One respondent reported that counselling was evaluated on a counselling competency skills checklist developed by their university and that students self-assess counselling skills alongside supervisor ratings. Free text comments (n=8) added that assessment also occurred a) by observation in class role play (n=2), b) by reviewing transcripts of the language ("talk") used by students in role play "to detect their use of micro-skills and their consideration of alternatives" (as well as viewing their role play interactions), c) in a "simulation assessment task in a coursework unit", and d) that evaluation is difficult to quantify as counselling education is likely to occur within clinical practicums out in the field and thus cannot not be captured within this survey. One academic who was 'unsure' if graduates were competent to provide counselling to support psychological wellbeing in post-stroke aphasia qualified his/her response choice by stating "They are taught about approaches such as CBT and family therapy and advised that they will need further training [after graduation] to actively use these techniques." Figure 4 shows the frequency count of the range of evaluations for counselling education.

(Figure 4 here)

Discussion

In the present study we aimed to investigate current counselling education for Australian speech-language pathology students for supporting psychological wellbeing in

people affected by post-stroke aphasia. We surveyed all 21 University programs offering entry level qualifications in speech-language pathology with 12 (57%) programs providing data for analysis.

The key results were that a) the majority programs, 83% (n=10), provide counselling education, b) approximately 33% (n=4) provided counselling education specific to supporting the psychological wellbeing of people affected by post-stroke aphasia, c) a range of counselling topics were taught including counselling approaches and theories, and a range of methods were used including coursework, observation and skills practice, d) counselling practice was mainly evaluated using written assignment and oral presentation assignment, e) only a small number of respondents, 5% (n=2), felt confident that graduates were competent to provide counselling to people affected by post-stroke aphasia, and f) where counselling education was provided, respondents agreed that counselling education is essential to speech-language pathology qualifications.

Data from this present survey of speech language pathology counselling education can be cautiously compared to data from counselling education offered in USA universities (Culpepper et al., 1994; McCarthy et al., 1986; Doud et al., 2020). Direct comparison between countries is challenging as education systems may be different. Further, the sample size for this study is small. Nonetheless, Table 2 displays the comparable data with a focus on supporting the psychological wellbeing of people affected by post-stroke aphasia.

In our survey, the majority of academics agreed that counselling education is important to speech-language pathology practice. This finding is similar in studies investigating counselling education from the USA (Culpepper et al., 1994; McCarthy et al., 1986). The rising importance of counselling skills in speech-language pathology may be reflected in the increase in the number of USA universities requiring counselling skills to qualify in communication sciences and disorders. The recent study by Doud and colleagues

(2020) reported that 56% of USA universities now require counselling skills to qualify, increasing from approximately 20% of universities in earlier studies (Culpepper et al., 1994; McCarthy et al., 1986). Similar to the study by Doud et al. (2020), our study found that the majority (83%) of programs included counselling education. Of concern is that some courses did not, meaning that some speech-language pathology graduates may not meet current expected professional practice standards (SPA, 2020) and USA (ASHA, 2016).

(Table 2 here)

Counselling education is embedded in disorder specific subjects in half of communication disorders courses in the USA (Doud et al, 2020). Comments from participants in this present study (n=3) indicate counselling education is embedded within some speech-language pathology programs in Australia. Previous studies reported that 59% of communication disorders programs offered education for counselling people with neurogenic disorders which will include post-stroke aphasia (McCarthy et al., 1986; Culpepper et al., 1994) compared with only four (33%) programs in Australia. Research describing generic counselling skills applicable to clinical and professional practice and those effective for supporting the psychological wellbeing of specific client groups such as people affected by post-stroke aphasia is required.

Counselling education requires supervised skills practice with the specific client population for the counselling to be effective (Shames, 2006). There is a strong argument that practice without theory cannot alone produce fully skilled behaviour in complex coping domains or complex clinical professions and that theory without practice provides even less chance of success in developing skilled behaviour (Dreyfus & Dreyfus, 1996). Not all universities taught counselling theories, and none provided counselling practice with a real client with aphasia within the university. Nonetheless, where there are limited opportunities to work with a specific client group a range of recommended supplementary education

methods such as observing video tape recordings of counselling interactions, role play and practice with simulated clients were offered (IALP, 2010). Other methods of counselling education could include online counselling education (Kim, 2012), and interactive web-based technology (IALP, 2010).

No respondents reported that they provided education for group counselling, while one reported that their university provided family therapy education to support psychosocial outcomes. Aphasia group therapy facilitated by multidisciplinary stroke teams with knowledge and skills to work with aphasia and psychological wellbeing may be an effective way to address psychosocial wellbeing (Gilham & Clarke, 2011; Glista & Pollen, 2007; Kneebone, 2016; Lanyon, Rose & Worrall, 2013). The psychosocial impact of aphasia on families is significant and a major part of speech-language pathology intervention in aphasia rehabilitation is to ensure family relationships and resources are preserved (Howe, Davidson, Worrall, Hersh, Ferguson, Sherratt, & Gilbert, 2012). A lack of education in group counselling and family therapy may relate to speech-language pathologists feeling under confident in aphasia group therapy and conversation partner training for family members of individuals with aphasia (Chang, Power, O'Halloran, & Foster, 2018; Ewing, 2007). Therefore speech-language pathologists could benefit from basic education in group counselling and family therapy. Further, respondents in the present study commented that students are likely to encounter counselling skills practice opportunities within their clinical placements external to the universities. Evaluation of the quality and quantity of student counselling education for working with people with post-stroke aphasia within placements external to the university is required.

Speech-language pathologists are bound by ethical, and scope of practice guidelines and the concern of overstepping practice boundaries is often raised. The Stepped Model for Psychological Care after Stroke provides a framework for the stroke multidisciplinary team,

including speech-language pathologists, in terms of their responsibilities and extent of psychological support or counselling they may provide (Gilham & Clarke, 2011; Kneebone, 2016). This provides speech-language pathologists with a guide to their boundaries when dealing with psychological issues in their clients affected by stroke and aphasia. Results of this survey provide information to support the development of professional practice guidelines and education requirements for speech-language pathology counselling practice.

Providing psychological care to clients affected by post-stroke aphasia requires more than foundation counselling skills for building an effective relationship. Within the Stepped Model for Psychological Care after Stroke speech-language pathologists working in stroke have a role to monitor and appropriately manage psychological issues in stroke survivors and their families at Level 1 (non-clinical level) and possibly Level 2 (mild symptoms) with appropriate support from mental health professionals/psychologists (Gilham & Clarke, 2011; Kneebone, 2016). A range of interventions that may prevent mood disorders in people affected by post-stroke aphasia have been identified and competency in these interventions may be valuable for speech-language pathologists (see summary in Baker et al., 2018).

Collaborations between professional counsellors or mental health professionals including psychologists and communication disorders faculty has been found to be beneficial for developing the counselling education curriculum (Kaderavek et al., 2004; Hilliard, 2012). Speech-language pathologists have found specialist psychological education within stroke and aphasia health settings valuable for increasing confidence and improving clinical practice with people affected by post-stroke aphasia (Northcott, Simpson, Moss, Ahmed, & Hilari, 2018; Ross, Barton, & Read, 2009). Collaborations between speech-language pathologists with additional qualifications in psychology and mental health professionals with experience in post-stroke aphasia to develop the counselling curriculum for speech-language pathology students may be fruitful. Research into these collaborations and co-constructed programs

would help to support the evaluation of counselling competency and may provide insight as to what education would be practical, useful and beneficial.

In the present study, academics had mixed opinions of graduates' competencies in counselling, with only ~17% (n=2) of academics believing graduates are competent to counsel clients with communication disorders. This finding is similar to that reported in the studies by Culpepper et al., (1994) and McCarthy et al., (1986) where 17% or less of academics felt that graduates met counselling competency. The evaluation of counselling competence of graduates was variable and limited to counselling skills and behaviours using checklists and written assignments. More formal evaluation using validated tools such as the Self-Efficacy Measurement Tool for Counselling in speech-language pathology (Victorino & Hinkle, 2019) which is based on the Counselor Activity Self-Efficacy Scales (Lent, Hill, & Hoffman, 2003), or the Counsellor Interview Rating Scale (Russell-Chapin & Sherman, 2000) used in speech-language pathology student counselling education with paediatric clients (Hilliard, 2012) may support monitoring of skills attainment and the development of appropriate education methods and content. Research is required to ascertain validity of these generic tools on counselling confidence in post-stroke aphasia.

In a US study, the majority of communication disorders students (95%, n=15) completing their clinical fellowship agreed or strongly agreed that it was within their role to provide counselling services to clients and caregivers (Phillips & Lucks Mendel, 2008). In post-stroke aphasia, nearly all speech-language pathologists (108 of 110 respondents) reported they have a role to play in addressing psychological wellbeing (Sekhon et al., 2015). Additionally, the majority (87%) of clinicians felt that it was the graduate program' responsibility to provide training in counselling in both the classroom and in practicum (Phillips & Lucks Mendel, 2008). Graduate and post-graduate training in counselling and psychology was associated with perceived knowledge, confidence, satisfaction and skills to address psychological

wellbeing in post-stroke aphasia (Sekhon et al., 2015). In a study where graduate students undertook approximately 20 hours of counselling education, the majority speech-language pathology students 82% (n=9) attributed an increased level of confidence to counselling course and requiring more experience to feel fully confident in counselling (55%, n=6) (Beck & Verticchio, 2014). Where counselling education is provided, graduates may qualify with basic counselling skills at a novice level. Speech-language pathologists may require post-graduate counselling education and supervised experience in the field, for example in post-stroke aphasia where the Stepped Care Model (Gilham & Clarke, 2011; Kneebone, 2016;) is implemented, to reach competency. Research to ascertain graduates' required and actual counselling competencies on entry to the profession is needed.

Future research might also consider the effects of counselling education on client experience and therapy outcomes. Goal achievement and client satisfaction in group therapy (Glista & Pollens, 2007) and increased cooperation with students (Kaplan & Dreyer, 1974) were some evaluated outcomes of student counselling education. Research into educating students to facilitate goal achievement, psychosocial wellbeing and adjustment after stroke for people affected by post-stroke aphasia is necessary.

Methodological limitations

The survey response rate (57%) was modest and below previous USA surveys (Culpepper et al., 1994: 63%; McCarthy et al, 1986: 73%) but slightly higher than the more recent survey (Doud et al., 2020: 42%). There are 15 universities in Australia offering 21 speech-language pathology education programs. In the current study, responses were not received from nine programs. A significant responder bias is probable because nearly half of the surveys were not returned. It is possible that speech-language pathology programs not offering a counselling course were reluctant to respond, likely affecting the results. Although steps were taken to assure anonymity and to encourage honest and candid responses,

respondents may have felt identifiable, thus leading to a decision not to participate. However, no negative comments from respondents were documented regarding the potential sensitivity of the topic. Factors associated with higher response rates in electronic surveys such as personalised contacts and contacts with participants before launching the survey (Cook, Heath & Thompson, 2000) may not easily apply to the context of this present survey. Given the small population of potential survey respondents in our case and the potential for identifying the data sources we were careful to avoid potential coercion and therefore did not contact potential respondents ahead of the survey going live.

The focus on collecting quantitative data was to fit within the limited resources available for this study. A future qualitative study to better understand the constraints, motives and concerns of those involved in delivering counselling education into speech-language pathology programs and to better understand what students were being taught and why, may illuminate the barriers and facilitators to education speech-language pathology students in counselling.

Counselling education in the USA is offered as a standalone counselling course, as an elective (Culpepper et al., 1994; McCarthy et al., 1986) or embedded within several units of the speech-language pathology course (Doud et al., 2020). As in the present survey, counselling education was not defined as either stand-alone or embedded within the curriculum. It is, therefore, difficult to conclude that those respondents who reported counselling education were describing stand-alone courses or education embedded within the curricula. Further, limited information was collected from three programs where the respondents' reported that counselling education was not provided at their university but later reported in free text that this education was embedded in the program. The majority of survey questions were not displayed to these three respondents due to the question logic set.

The most frequently reported range of hours of counselling education for working as a speech-pathologist and specifically in post-stroke aphasia were both below 3 hours (0-3 hours). It would have been prudent to separate some education (1-3 hours) from none (zero hours) to identify areas of need for future counselling education.

Conclusion

People affected by aphasia after stroke are particularly vulnerable with poorer mental health and rehabilitation outcomes than stroke survivors without aphasia. Speech-language pathologists are trained to work with people with aphasia and those working in stroke have a key role in supporting psychological wellbeing for their clients. At a minimum, graduate speech-language pathologists should have competencies for providing relevant interventions such as counselling for their clients after stroke related to aphasia rehabilitation and life participation goals (ASHA, 2016; Gilham & Clarke, 2011; Kneebone, 2016; SPA, 2020). Education in counselling skills to enable speech-language pathologists to effectively and competently support the informational and emotional needs of clients with communication (and swallowing) disability is essential and should be a component of speech-language pathology entry-level education (Doud et al., 2020; Kaderavek et al., 2004; Parkinson & Rae, 1996; Stone & Olswang; 1989; Victorino & Hinkle, 2019).

The results of this survey identify gaps in counselling education for speech-language pathology students in Australia, including availability of foundation counselling education within programs and limited opportunity for counselling education for supporting the psychological wellbeing of people affected by aphasia after stroke. A counselling education module incorporating relevant theory, content and supervised practice relevant to speech-pathology practice may be beneficial. A working party of experts and stakeholders would be an effective mechanism to develop relevant and effective education and appropriate

guidelines for speech-language pathologists' counselling practice to support the psychological wellbeing in this client group. Research evaluating the effectiveness of this education on graduate speech-language pathologists' counselling self-efficacy and competencies is required. Most importantly, gains to client outcomes could also be considered.

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Appendix A.

Checklist for Reporting Results of Internet E-Surveys (CHERRIES) (Eysenbach, 2004)

Item Category	Checklist item	Reported
Design	Describe survey design	Target population described - educators of counselling in accredited speech pathology educational programs in Australia. Convenience sample
IRB (Institutional Review Board) approval and informed consent process	IRB approval	Ethics approval (reference HEC18360) for this study was granted by the College Human Ethics Sub-Committee – Science, Health and Engineering (CHESC SHE) of La Trobe University.
	Informed consent	Participants were provided with a participant information statement that detailed participants' involvement in the study including names and contact of investigators, length of time the survey was open, how long the survey would take to complete, how the data would be stored and location of stored

		data, and how long the data would be stored for.
	Data protection	No personal information was collected.
Development and pre-testing	Development and testing	The survey was based in part on past surveys of counselling curriculum. The survey was piloted with 3 universities in New Zealand.
Recruitment process and description of the sample having access to the questionnaire	Open survey versus closed survey	The survey was closed and distributed to the universities listed on the Speech Pathology Australia website as offering accredited speech pathology education programs.
	Contact mode	Prospective participants were contacted via email and provided a link to a Web based questionnaire for data entry using Qualtrics.
	Advertising the survey	The survey was announced via direct email contact to potential participants at eligible universities.
Survey administration	Web/E-mail	Prospective participants were contacted via email and provided an anonymous link to a Web based questionnaire for data entry using Qualtrics.
	Context	The survey was distributed to the universities listed as offering accredited speech pathology education programs in Australia. Data were collected using La Trobe University's Qualtrics XM platform.
	Mandatory/voluntary	The survey was voluntary.
	Incentives	No incentives were offered.
	Time/Date	Data were collected over six weeks (29 October 2018 to 14 December 2018) during the teaching semester when it was likely the target participants were available.
	Randomization of items or To prevent biases items can be randomized or alternated. questionnaires	Items were not randomised.
	Adaptive questioning	Adaptive questions using display logic were used e.g. question 4 and 8.
	Number of Items	There were between 1 to 6 questions on each page.
	Number of screens (pages)	There were 7 pages (screens) in the Web survey
	Completeness check	Submitted questionnaires indicated completeness.

		Non-response options or one enforced option was provided where applicable.
	Review step	Participants were able to change their answers using the 'Back' button.
Response rates	Unique site visitor	IP addresses.
	View rate (Ratio of unique survey visitors/unique site visitors)	N=21
	Participation rate (Ratio of unique visitors who agreed to participate/unique first survey page visitors)	N=12
	Completion rate (Ratio of users who finished the survey/users who agreed to participate)	N=12
Preventing multiple entries from the same individual	Cookies used	None
	IP check	IP checked. No duplicates found.
	Log file analysis	No multiple entries found.
	Registration	Not applicable
Analysis	Handling of incomplete questionnaires	All returned questionnaires were completed and analysed (N=12)
	Questionnaires submitted with an atypical timestamp	Time completed was collected but not analysed.
	Statistical correction	Not applicable.

Appendix B
Supplementary file-Survey tool

Please note that in Australia, the term 'speech pathology' is used and this term has been left unchanged as used in the distributed survey.

A SURVEY OF COUNSELLING EDUCATION FOR SPEECH PATHOLOGY STUDENTS WORKING IN POST-STROKE APHASIA

Thank you for taking this survey about counselling education for speech pathologists to support the psychological wellbeing of people affected by post-stroke aphasia. The **Participation Information Statement (attached** to this survey) outlines the aims and content of this survey.

This survey consists of **17 closed questions and one open-ended question.** Depending on your responses, you may have fewer questions to answer. We estimate the full survey to take **approximately 20 minutes** to complete. **One survey response is requested for each speech pathology program taught at your university.** That is, if the university where you work provides one course in speech pathology, for example, a Bachelors course, then one response is requested from your university. **If the university where you work offers a Bachelors and a Masters program in speech pathology, we invite you to complete two surveys, one for each program.** The same academic or two different academics may complete a survey for each of the Bachelors or Masters course. **A response is not required from each campus where the speech pathology program is taught if there are multiple campuses at your university.**

To participate, **you must be a university staff member involved in educating speech pathology students. Ideally,** you will be involved in **educating speech pathology students about counselling skills to address psychological wellbeing in people affected by post-stroke aphasia**. However, you are eligible to participate if you are involved in educating speech pathology students in neurogenic communication disorders and/or psychology and/or counselling or any combination of these areas. For example, if you are involved in educating speech pathology students in aphasia but not in counselling or psychology, you are still eligible to participate. Similarly, if you are involved in educating speech pathology students in psychology or counselling but not in aphasia or neurogenic communication disorders, you are still eligible to participate. The coordinator of the speech pathology course or senior academic in speech pathology is also eligible to complete this survey.

The survey is not linked to email addresses and as such **all responses are anonymous.** Therefore, responses cannot be withdrawn once submitted. Results of this survey may be used in publications, conference presentation, thesis and other relevant means of information dissemination relating to the student researcher's Ph.D.

This survey is open for four weeks from the date of dissemination. A reminder email will be sent two weeks from the survey closing date. Please feel free to contact any of the research team as below should you have further questions regarding your participation in this survey.

Please contact us if you wish to receive a copy of the results via email or post. Your details will not be stored or used for this research project

Name/Organisation	**Position**	**Telephone**	**Email**
X (removed for blind per review)	Chief Investigator	+	
Y (removed for blind per review)	Secondary Investigator	+	
Z (removed for blind per review)	External Investigator	+	
A (removed for blind per review)	Ph.D. student		

This project has been granted ethics approval by the College Human Ethics Sub-Committee – Science, Health and Engineering (CHESC SHE) of La Trobe University. Ethics Reference Number: HEC18360.
If you have a complaint about any part of this study, please contact the Senior Research Ethics Officer, phone: +61 3 9479 1443 or humanethics@latrobe.edu.au. Please quote Ethics Reference Number: HEC18360.

Please refer to these terms and definitions below when completing the survey.

In this survey, "people affected by post-stroke aphasia" refers to "the stroke survivor with aphasia, family and significant others". These people may also be referred to as "clients".

Counselling in speech pathology refers to a purposeful and caring process that includes both the general working (therapeutic) relationship that underlies all clinical service activities and interactions designed to deal with specific needs or problems of the individuals and their families (Stone & Olswang, 1989). Counselling aims to develop the client's insight to pursue realistic and clearly understood goals, manage and adjust to the communication disorder, for example, aphasia after stroke, and improve quality of life. It is typically brief and responds to a concern or problem in the present moment. Informational and personal adjustment counselling are two approaches in speech pathology. Informational counselling is described as a process of explaining the nature, assessment, and treatment of the problem (Atkins, 2007). Personal adjustment counselling is described as a client-centred approach that helps clients adjust and cope with thoughts, attitudes, feelings, and problems related to the communication disorder (Rosenberg, 1998) and to make use of available personal and societal resources (Stone and Olswang, 1989).

Speech pathology **education in counselling** may include coursework, observation, clinical practicum, and evaluations.

Stroke rehabilitation is defined as a proactive, person-centred, goal orientated process that aims to improve function and/or prevent deterioration of function and to bring about the highest possible physical, psychological, and social wellbeing (Stroke Foundation, 2010).

Psychological wellbeing is defined as a dynamic state, in which the individual is able to develop their potential, work productively, build positive relationships, and contribute to their community. Psychological wellbeing is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society.

Assessment of aphasia includes the collection of information to diagnose aphasia and to understand its impact on the stroke survivor's life. Management of aphasia includes intervention that improves the client's quality of life. This may include individual and/or group approaches, planning for and delivering therapy (goals), education, advocacy, and utilizing multidisciplinary team members.

Competency is defined as an 'individual's ability to effectively apply all their knowledge, understanding, skills and values within their designated scope of practice' (CBOS-SPA, 2011).

Thank you for your time in taking this survey.

Consent Form – Declaration by Participant

I (the participant) have read understood the Participant Information Statement, and any questions have been answered to my satisfaction. I agree to participate in the study. I agree the information provided by me in this survey or with my permission during the project may be included in a thesis, presentation and published in journals on the condition that I cannot be identified.

I would like my information collected for this research study to be (please select all that apply):

- Only used for this specific study (1)
- Used for future related studies (2)
- Used for any future studies (3)

Q1 The university I work at is located in

- Western Australia (1)
- South Australia (2)
- Queensland (3)
- Victoria (4)
- New South Wales (5)
- I prefer not to say (7)

Q2 Please complete ONE survey for EACH speech pathology course offered at your university. Please select ONE speech pathology course that you are completing this survey for.

- Bachelors degree (1)
- Masters by coursework (2)
- Combined Bachelors and Masters degree (3)
- Other (please specify) (4)

  _____

Q3 Please detail your role in speech pathology education at the university where you work. Please select all that apply.

- I educate speech pathology students in counselling. (1)
- I educate speech pathology students in aphasia. (4)
- I educate speech pathology students in communication disorders of neurological origin. (8)
- I educate speech pathology students in psychology. (9)
- Other. Please specify. (7)

  _____

Display This Question:
If Please detail your role in speech pathology education at the university where you work. Please se... = I educate speech pathology students in counselling.

Q4 You responded that you educate speech pathology students in counselling. Do you have qualifications to provide counselling education?

- Yes. Please describe qualifications you have that enable you to provide counselling education to speech pathology students. (1)
  _____
- No. Please add any comments if you wish. (2)
  _____

Q5 Please select one response to this statement. Speech pathology students are trained to competently assess and manage post-stroke aphasia at the university where I work.

- Yes (4)
- No (5)

Q6 Please select one response to this statement. In my opinion, counselling education is essential to speech pathology qualifications.

- Yes (1)
- No (2)

Q7 Please select one response to this statement.
Counselling education is provided to speech pathology students at the university where I work.

- Yes (1)
- No (2)

Skip To: Q8 If Please select one response to this statement. Counselling education is provided to speech patholo... = No

Display This Question:
If Please select one response to this statement. Counselling education is provided to speech patholo... = No

Q8 You responded that counselling education is NOT provided to speech pathology students at your university.
Please provide possible reason(s) for this in your opinion. Please select all that may apply.

- There are no qualified staff to provide counselling education to speech pathology students (1)
- There is no time within the speech pathology course to provide counselling education (2)
- Counselling education is not important to speech pathology qualification (3)
- Other (please specify). (4)
  _____

Skip To: Q17 If Selected Choices > 0

Q9 Is counselling education a prerequisite for attaining speech pathology qualifications in the university where you work? Please select one answer.

- Yes, counselling education is a component of the speech pathology course. (1)
- No, counselling education is not a component of the speech pathology course. (2)
- I am not sure. (3)

Q10 We are particularly interested in counselling education for speech pathologists to support psychological wellbeing in people with post-stroke aphasia and their significant others. Does the university where you work provide counselling education specifically to enable speech pathologists to address the psychological wellbeing of people impacted by post-stroke aphasia? Please select one response to the following question.

- Yes (1)
- No (2)
- I am not sure (4)

Q11 We are interested to know about any generic or specific counselling education offered to speech pathology students at your university which may improve speech pathologists' counselling practice in post-stroke aphasia. Please select topics of speech pathology counselling education offered at the university where you work. Please select all that apply.

- Family counselling/family therapy (1)
- Group counselling (2)
- General principles of counselling (3)
- Counselling people with aphasia and their significant others (4)
- Counselling people of diverse cultural and linguistic backgrounds (5)
- Professional self care (6)
- Communicating bad news (7)
- Interdisciplinary practice with mental health professionals including social workers and psychologists (8)
- Stress management for clients (9)
- Interpersonal/ communication skills to develop an effective clinician - client relationship (10)
- Counselling theories for example humanistic, behavioural, cognitive. (11)
- Counselling approaches for example cognitive behavioural therapy, motivational interviewing, mindfulness, problem solving, coaching. Please list the key approaches taught to speech-language pathologists in the text box. (12)

  _____

- Other (please specify) (13)

  _____

Q12 This question asks the approximate number of hours of counselling education provided to speech pathology students over the duration of their course, at the university. This does not include counselling education while on clinical placements external to the university.
Please estimate the total number of hours of 1) counselling education within the speech pathology course and also 2) specifically for working with people affected by post-stroke aphasia.

	Counselling education for working as a speech pathologist				Counselling education for working with people affected by post-stroke aphasia			
	0-3 hours (1)	4-6 hours (2)	7-10 hours (3)	Over 10 hours (4)	0-3 hours (1)	4-6 hours (2)	7-10 hours (3)	Over 10 hours (4)
Approximate hours of counselling observation at the university. (1)								
Approximate hours of counselling coursework at the university (2)								
Approximate hours of counselling practicum at the university (3)								

Q13 The methods of counselling education for speech pathology students at the university where I work include... (please select all that apply).

- Observation of counselling in practice (1)
- Online modules (2)
- Didactic lectures (3)
- Role play sessions (4)
- Practice with simulated client (5)
- Practice with real client (6)
- Group discussions / tutorials (7)
- Watching videos of counselling techniques (8)
- Case discussions / problem based learning (9)
- Other (please specify) (10)

_____

Q14 How is counselling knowledge, skills, confidence and competence assessed in speech pathology students? Please select all applicable responses.

- Counselling education is not assessed (13)
- COMPASS online assessment tool (tool to assess Competency Based Occupational Standards- CBOS) (1)
- Review of counselling role play video (2)
- Review of client counselling video (3)
- Live objective structured clinical examination (OSCE) (4)
- Written assignment (5)
- Multiple choice test (6)
- Problem based learning assignment (7)
- Oral presentation assignment (8)
- Completion of an online unit (9)
- Subject exams (10)
- As rated on a counselling competency/skills checklist/tool. (11)
- Other (please specify) (12)

_____

Display This Question:

If How is counselling knowledge, skills, confidence and competence assessed in speech pathology stud... = As rated on a counselling competency/skills checklist/tool.

Q15 Please provide information regarding the tools/checklists your university uses to assess counselling competency for speech pathology students. Please provide details (e.g. name or references) in the text box provided if able.

	Who rates counselling competency?		
	Student self assessment (1)	Supervisor rated assessment (2)	Student peer rated assessment (3)
Counselling competency is measured using a tool developed by our university. (1)	•	•	•
Counselling competency at our university is measured using a published tool. (2)	•	•	•
Other. (3)	•	•	•

Q16 This question seeks your opinion about whether speech pathologists who graduate from your university are competent in counselling to support psychological wellbeing in people affected by post-stroke aphasia. Text boxes are provided if you wish to add any comments. Please select **one** response. On qualifying as speech pathologists from my university, I think graduates are...

- Competent to provide counselling to support psychological wellbeing in people affected by post-stroke aphasia. (1)
  _____
- Not competent to provide counselling to support psychological wellbeing in people affected by post-stroke aphasia. (2)
  _____
- I am not sure. (3)
  _____

Q17 Thank you for your participation in this survey. If you have further comments about the content of this survey or about counselling education for speech pathology students, please feel free to add your comments here. We remind you that your responses are anonymous and thus confidential.

_____
_____
_____
_____
_____

Table 1. Academic qualification for providing counselling education and opinion of student counselling competency on graduation.

Program type	Are you qualified to provide counselling education to SLP students? NA=question not displayed to respondent	Qualification to provide counselling education NA=question not displayed to respondent	Academic's opinion of student counselling competency on graduation NA=question not displayed to respondent
Bachelors	No	NA	NA
Bachelors	No	Short courses and mentoring by faculty with counselling qualifications	Not sure
Bachelors	NA	NA	NA
Bachelors	Yes	SLP qualifications	Yes
Bachelors	NA	NA	NA
Bachelors	Yes	Masters and PhD in Psychology	Yes
Bachelors	Yes	Foundation certificate in counselling and psychotherapy	No
Masters	Yes	Foundation certificate in counselling and psychotherapy	No
Masters	NA	NA	NA
Masters	NA	NA	Yes
Combined Bachelors/Masters	NA	NA	Not sure

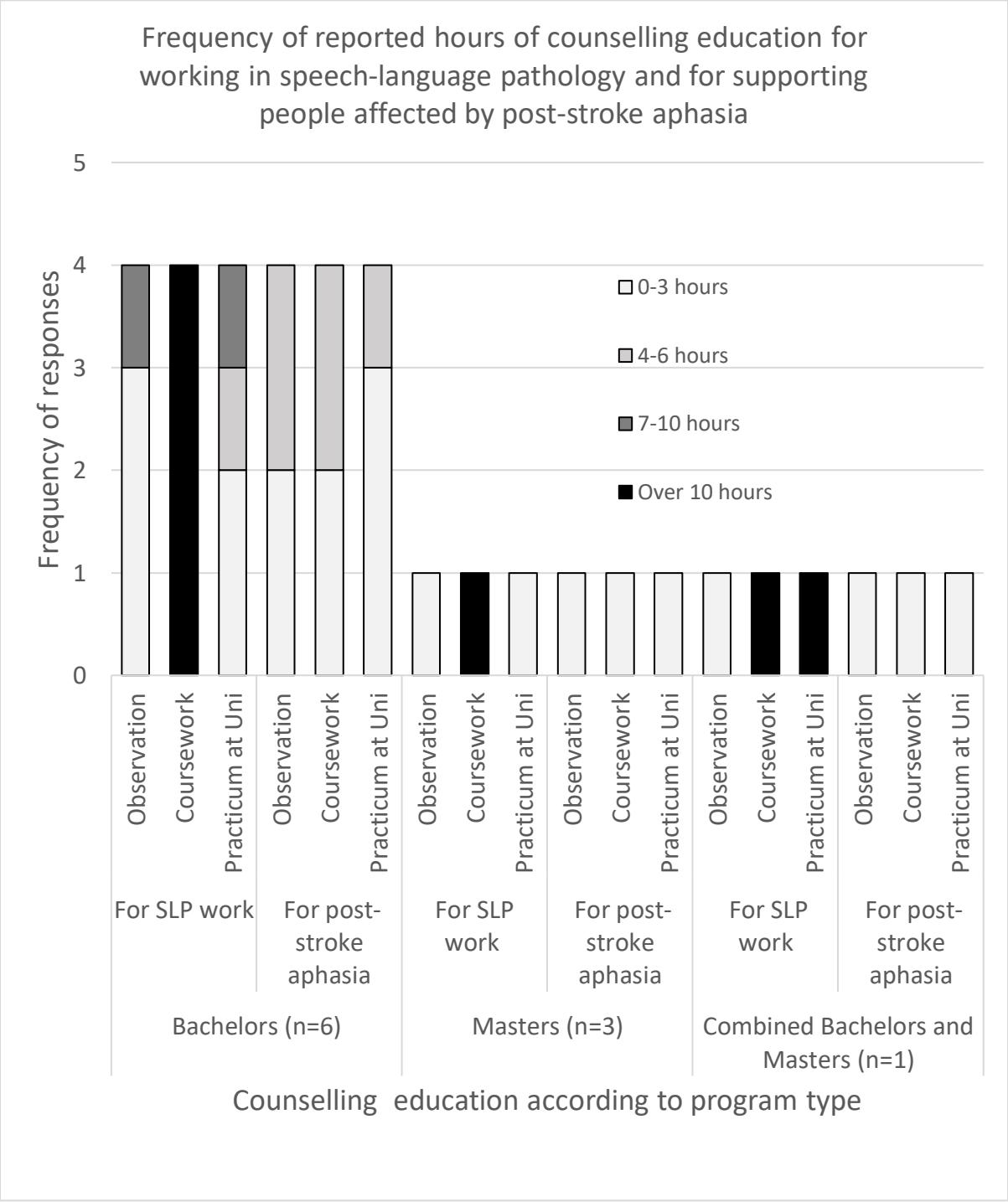
NA: Not applicable. Some questions were not displayed to respondents depending on how they answered previous questions (set survey logic).

Table 2. Data comparing surveys of counselling education for speech-language pathologists.

Authors/Date/ Country-in chronological order	Response rate	% that offer counselling education	Is counselling required to attain qualifications? (%)	Are graduates adequately prepared (? Competent) to meet the counselling needs of CSD clients	Hours of counselling education	Outcomes of counselling education
McCarthy, et al[a] (1986) *USA*	73% response rate; n=98 from n=134 courses	94% (n=98)	20% required counselling to attain CSD qualifications	12% respondents felt students were prepared to counsel	Not collected	Adequate education and education to provide counselling to CSD clients
Culpepper et al[a] (1994) *USA*	63% response rate. n=121 from n=193 courses	95% (n=121)	22% required counselling to attain CSD qualifications	17% respondents felt students were prepared to counsel	Not collected	Adequate education and education to provide counselling to CSD clients
Doud et al[a] (2020) *USA*	42% response rate. n=108 from n=255 courses	59% offer stand-alone counselling education; 86% embed counselling education into their course (n=108)	52% of respondents reported counselling education is a requirement to graduation from CSD	Not collected	Range 1-4 credits[c]. 2 credits[c] (n=19) 3 credits[c] (n=22)	Ethics, role of the SLP, counselling fundamentals, interprofessional, self-reflection/assessment, diversity, psychosocial adjustment, educational counselling, families, and skills.
Sekhon et al[b] *Australia* (this study 2019)	57% response rate. n=12 from n=21 courses	83% n=10	58% of courses reported counselling education is required to speech-language pathology qualifications	43% (n=3 from n=7) respondents felt SLP students were competent in counselling for post-stroke aphasia	Range 0-3 hours of counselling observation and practice, with over 10 hours of course-work.	Adequate education and education to provide counselling to support the psychological wellbeing of clients affected by post-stroke aphasia

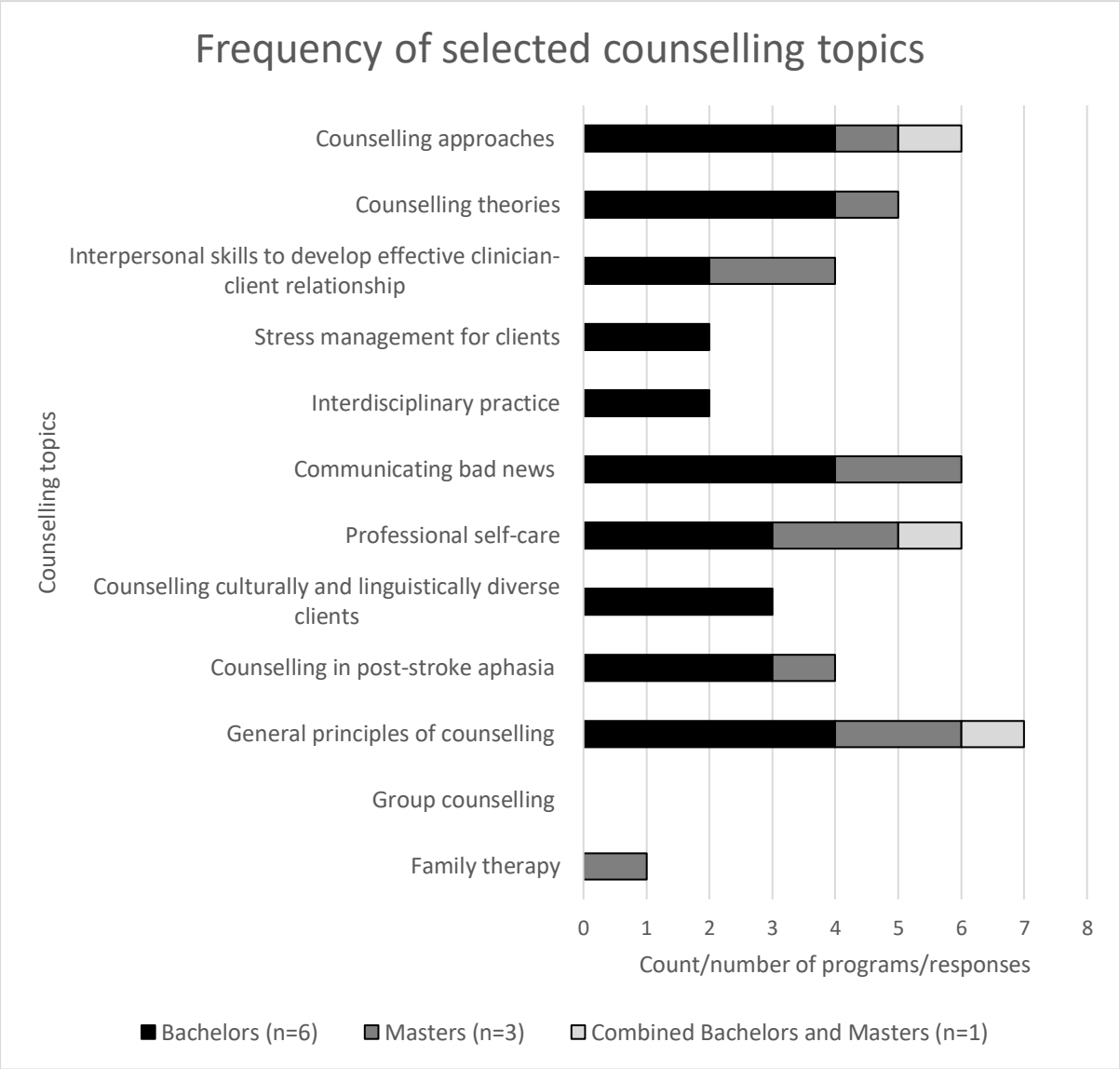
Notes: a=survey of communication sciences and disorders courses (CSD) including both audiology and speech-language pathology (SLP) student's education.
b=survey of courses education speech pathologists (no audiologists), with focus on counselling education for working with people affected by post-stroke aphasia. c=one credit equates to approximately one hour.

Figure 1. Frequency of reported hours of counselling education for working in speech-language pathology and for supporting people affected by post-stroke aphasia.



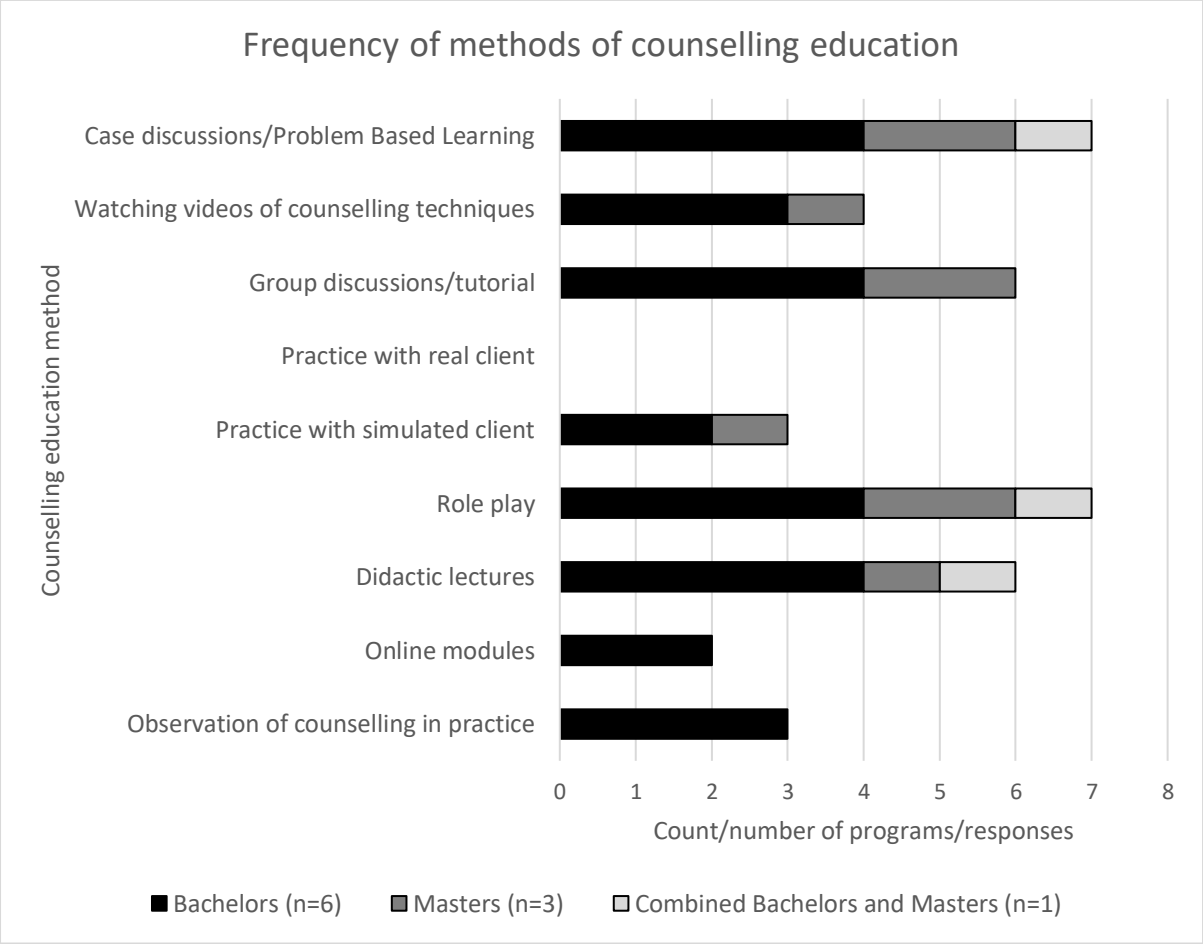
Note: This question was not displayed to respondents from Bachelors (n=3) and Masters (n=1) programs depending on how they answered previous questions (set survey logic).

Figure 2. Frequency of counselling topics in speech-language pathology programs



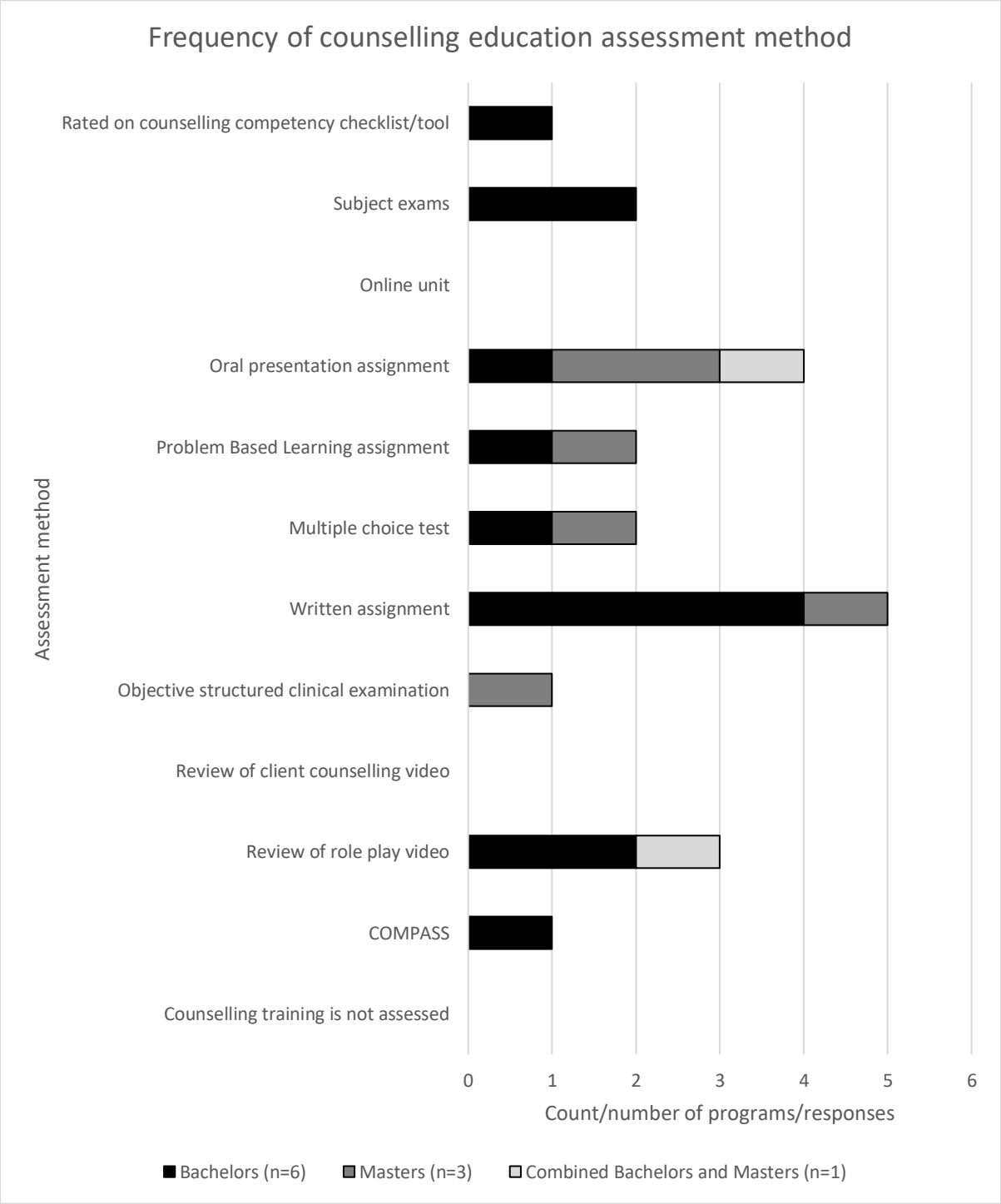
Note: This question was not displayed to respondents from Bachelors (n=2) and Masters (n=1) programs depending on how they answered previous questions (set survey logic).

Figure 3. Frequency of methods of counselling education



Note: This question was not displayed to respondents from Bachelors (n=2) and Masters (n=1) programs depending on how they answered previous questions (set survey logic).

Figure 4. Frequency of methods of assessment of counselling education.



Note: COMPASS®: Competency-based assessment tool to assess Australian speech-language pathology students' professional performance in the workplace **(**McAllister, Lincoln, Ferguson, & McAllister (2011).
Note: This question was not displayed to respondents from Bachelors (n=2), Masters (n=1) and Combined Bachelors and Masters (n=1) programs depending on how they answered previous questions (set survey logic).

Figure captions (list):

Figure 1. Frequency of reported hours of counselling education for working in speech-language pathology and for supporting people affected by post-stroke aphasia.

Figure 2. Frequency of counselling topics in speech-language pathology programs.

Figure 3. Frequency of methods of counselling education.

Figure 4. Frequency of methods of assessment of counselling education.