

'Giving yourself some breathing room...': An exploration of group meditation for
people with aphasia

Sweta Panda¹, Anne Whitworth¹, Deborah Hersh², Britta Biedermann^{1,3}

¹School of Occupational Therapy, Social Work, and Speech Pathology, Faculty of
Health Sciences, Curtin University, Australia;

² Speech Pathology, School of Medical and Health Sciences, Edith Cowan University,
Australia;

³Department of Cognitive Science, Faculty of Human Sciences, Macquarie University,
Australia

Address for correspondence:

Britta Biedermann,

School of Occupational Therapy, Social Work, and Speech Pathology

Curtin University

WA, 6102, Australia.

Tel: +61 8 9266 7992

Fax: +61 8 9266 3131

Email: b.biedermann@curtin.edu.au

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Analysis

Abstract

Background: Meditation practices have been found to improve both cognitive and psychological functions related, in particular, to attention and well-being in both healthy people and those with chronic health conditions, including stroke. Considering the range of cognitive and psychosocial consequences in people with post-stroke aphasia, meditation has been identified as a potential rehabilitative tool to target these areas, investigating also, in some studies, any potential impact on language abilities. Even with growing numbers of studies exploring the effectiveness of meditation techniques in the stroke population, no study to date has sought to explore the impact of meditation from the perspective of the lived experience of people with aphasia.

Aim: This preliminary study explored the perceived impact of meditation on a range of activities and areas of participation for people with chronic aphasia who, with the exception of one participant, learned how to meditate after the onset of their stroke.

Methods: Five participants who regularly attended a meditation group for people with aphasia agreed to an individual semi-structured interview, followed by participation in two subsequent focus groups to member-check data. Interviews were thematically analysed using an Interpretative Phenomenological Analysis approach in order to capture the lived experience of meditation.

Results: A consistent and positive psychosocial impact was reported by all participants related to the development of acceptance and resilience post-stroke. As with healthy meditators, individual variation was seen in how people learn meditation, and in their preferences and success with different meditation techniques. The reduced focus on the language impairment itself was a strong motivator to attend the meditation group, however, the benefit of regular practice on self-acceptance and building resilience, and

a sense of calm were also prominent themes. The positive experience of meditating in a group was a further motivator to participate regularly in the meditation practice.

Conclusion: Meditation can have psychosocial benefits for people with aphasia and may offer a positive and complementary approach when living with aphasia following stroke. Individual variation in responsiveness to meditation techniques highlighted the importance of monitoring participant preferences when delivering and interpreting meditation outcomes with people with aphasia. The role of meditation in language rehabilitation with people with chronic aphasia as a complementary treatment tool remains an area of future enquiry.

Key words: aphasia, meditation, mindfulness, qualitative approach, Interpretative Phenomenological Analysis

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Introduction

Meditation has received increased attention in aphasia research in recent years, with studies exploring its rehabilitation potential in promoting cognitive and linguistic change (Dickinson, Friary, & McCann, 2017; Laures-Gore & Marshall, 2016). While the measurement of behavioural processes has provided one level of insight into the utility of meditation with this population, to date, the views of people with aphasia (PwA) have not been sought to inform this line of research despite the lived experiences of people undergoing interventions having been shown to offer unique insights into their value (McKevitt, Redfern, Mold, & Wolfe, 2004).

The Impact of Aphasia on Language and Well-being

The cognitive, physical, social and emotional consequences of stroke can have widespread implications for a person's functioning (Littooji, Dekker, Vloothuis, Legt, & Widdershoven, 2016; Mukherjee, Levin, & Heller, 2006). This is consistent with the World Health Organisation's International Classification of Functioning, Disability and Health Framework (WHO ICF), which recognises the holistic impact of an illness or disability (WHO, 2001). The process of adjustment to chronic illnesses can be conceptualised as an individual's response to and journey of acceptance, accommodation and management of the changes affecting various domains of their life (Taylor, Todman, & Broomfield, 2011).

Approximately one third of people who experience a stroke have aphasia (Engelter et al., 2006), a linguistic deficit arising from impairments to language mechanisms underlying the computation of linguistic rules, processes and representations (Hula & McNeil, 2008). A strand of research has found evidence that cognitive mechanisms, such as attention, may underlie linguistic mechanisms, however,

the extent of this influence remains contentious (Murray 2012; Hula & McNeil, 2008). In addition to cognitive-linguistic difficulties, emotional and psychological consequences associated with aphasia include depression, anxiety, changes in self-identity and social isolation, arising as a direct or indirect impact of the stroke (Taylor et al., 2011; Mukerjee, Levin, & Heller, 2006). These consequences have been found to negatively influence functional, neuro-physical, and cognitive rehabilitation (Cahana-Amitay & Albert, 2015; Code & Herrmann, 2003). One approach to intervention that has the potential to address the cognitive, linguistic and psychosocial sequelae of post-stroke aphasia is meditation.

Meditation and Aphasia

Cahn and Polich (2006) define meditation as “practices that self-regulate the body and mind, thereby affecting mental events by engaging a specific attentional set” (p.180). Operationalised definitions of meditation describe it as a two part process that focuses on bringing and maintaining one’s attention to the present moment, thereby cultivating a state of mindfulness and observing all thoughts and emotions unfolding within the present moment with an openness, acceptance and non-judgement (Bishop et al., 2004; Kabat-Zinn, 2003). Consequently, meditation practices are proposed to improve attentional control, and also reduce rumination and elaborative mental processing to diminish mental reactivity to negative or dysphoric emotional states (Bishop et al., 2004; Hayes & Feldman, 2004; Kabat-Zinn, 2003). While mindfulness meditation is frequently used as a term in this literature to draw attention to the state of mindfulness (giving your full attention to the present task at hand), the overarching term of meditation is used here to maintain focus on the underlying processes and techniques to achieve this state.

Recent empirical studies have found improvements in coping with anxiety and stress in both healthy (Sedlmeier Loße, & Quasten, 2018) and clinical populations with mental health problems when practising meditation (Goyal et al., 2014). However, there remains some contention regarding impact on depression and traumatic memories that can prove challenging when meditating (e.g., Lindahl, Fisher, Cooper, Rosen, Britton, 2017; Compson, 2014; Miller, 1993). As post-stroke aphasia is frequently associated with cognitive-linguistic difficulties impacting directly on psychosocial well-being (Hilari, 2011), a small body of quantitative research has investigated the impact of meditation on attention, anxiety and language outcomes in people with aphasia (PwA) (Dickinson et al., 2017; Laures-Gore & Marshall, 2016; Marshall, Laures-Gore, & Love, 2017; Orenstein, Basilakos, & Marshall, 2012). Gains in attention were demonstrated in all of the above mentioned studies, while only one study has reported significantly improved linguistic outcomes (Laures-Gore & Marshall, 2016). Additionally, Dickinson et al. (2017) used meditation instructions following the script of Kabat-Zinn (1991), focusing predominantly on body scanning techniques, to target linguistic-anxiety in their single case study, and found significant improvements in anxiety relief, self-image, and reduction of emotional reactivity which increased the participant's willingness to communicate post-intervention and reduced the extent to which negative experiences with disability and aphasia impacted the participant's life.

To date, no study has explored the lived experience of meditation from the perspective of PwA. In the context of yoga, Garrett, Maarten, Immink, and Hillier (2011) have reported outcomes for people after stroke more generally where a small meditation component was embedded at the end of the yoga session. While positive outcomes related to physical and psychosocial benefits were reported following a 10-week yoga program, this study did not enable conclusions to be drawn specifically

related to meditation or to people with aphasia since people with stroke were included in this study, who not always presented with aphasia.

Meditation and Chronic Illnesses

Several studies have explored the meditation experiences of other chronic clinical populations using qualitative methodologies, offering insights into the learning, use and perceived outcomes of different meditation techniques. Luiggi-Hernandez et al. (2017) analysed audio-recorded data from four 90-minute semi-structured focus groups from 25 adults with chronic lower back pain to explore how meditation was perceived and might have impacted participants. Key results included overcoming fear of pain, reduced focus and awareness of pain, and reduced pain significance. Unfortunately, however, during the focus groups, some participants were reported to dominate discussions, with no strategies to address this specified in the study, and potentially impacting on the credibility of results at the group level. Further, the study did not specify their member-checking and/ or data-triangulation processes, reducing confirmability (Luiggi-Hernandez et al., 2017).

Chadwick, Kaur, Swelam, Ross, and Ellet (2011) used a qualitative approach to explore the experience of a meditation-based intervention with 12 adult participants with bipolar disorder. Audio-recorded individual semi-structured interviews were conducted and thematically analysed. Investigator triangulation involved at least two researchers coding transcripts independently before holding a consensus review, conducting member-checks with six participants, and assessing the inter-rater reliability of fifty quotations to increase qualitative credibility, confirmability and dependability. Seven themes were confirmed: (i) greater focus on the present moment, (ii) increased awareness of moods, (iii) acceptance, (iv) use of different meditation techniques for different moods, (v) reduced negative affect (anxiety, shame, guilt), (vi) reduced

distress to negative thoughts, and (vii) reduced impact of negative mood (Chadwick et al., 2011).

Aims of the Study

While insights have been gained from previous qualitative studies of chronic populations using meditation, there is little known of the first-hand perspectives (lived experience) of meditation by PwA. This study aimed to explore the experiences of meditation in depth using a qualitative methodology, focusing on a small group of PwA who had long-term meditation experience (all participants had a minimum of four years of meditation experience). The study sought to address:

1. What are the lived experiences of PwA who have practised meditation?
2. Do PwA perceive that meditation has had an impact on their aphasia? If so, what changes do they perceive?

Method

Research Design

The study employed a qualitative design, drawing on the principles of Interpretative Phenomenological Analysis (IPA) (Smith, Flowers, & Larkin, 2009), and involved an individual semi-structured interview with each participant, and two member-check groups with all participants. The primary purpose of IPA relates to exploring the lived experience, or the 'insider perspective' (Smith et al., 2009, p. 36). Following on from the work of Husserl, the philosopher initially associated with phenomenology (Smith et al., 2009), access to understanding the lived experience of a phenomenon involves trying to see things on their own terms, or as close to their experiences as possible. Husserl's phenomenological method involves setting aside, or bracketing out one's own biases, aspects of the phenomenon that are taken for granted to explore how they are perceived. In order to achieve this understanding of others'

experiences, IPA involves ‘wanting to stand alongside the participant, to take a look at them from a different angle, ask questions and puzzle over things they are saying’ by being both ‘empathic and questioning’, (Smith et al., 2009, p. 36). For this project, these ideas translated into a desire to set aside assumptions about how people might experience meditation and, instead, deeply explore and be open to their perceptions of the experience.

Accessing the Lived Experiences of PwA

Previous qualitative explorations of the lived experiences of PwA (Dalemans, Wade, van den Heuvel, & de Witte, 2010; Luck & Rose, 2007; Tomkins, Siyambalpitaya, & Worrall, 2013) have found that modifications to traditional qualitative interview approaches have been required to account for the vulnerability of the population and their communication difficulties. The details of how the interviews and focus groups were run are described below; the opportunity to access to rich data was maximized through careful attention to the interview schedule questions (Smith et al., 2009) and how they were phrased, through using supported conversation techniques (Kagan, 1998), extra time for responses, and opportunities for repair and verifications of accurate understanding of the points made by the interviewer. Additionally, Dalemans et al. (2010) reported not video-recording interviews to avoid intimidating the participant; the study instead recruited an interview-assistant to note down non-verbal data and ask questions to clarify discrepancies. Our study involved careful noting of non-verbal responses and verbatim transcriptions. While Smith et al. (2009) cautioned against focus groups as a way of collecting phenomenological data, this study employed the focus group technique in addition to the interviews as a way of member-checking and validating, and deepening the interviews. All participants knew each other well by the time of the focus groups, so rich insights into the experiences of meditation were

enhanced by both approaches. Thick description of the phenomenon helps to demonstrate how themes were developed, supporting meaningful and credible results. The points recommended by Tong, Sainsbury and Craig (2007) have been included here in order to ensure full reporting for the purposes of methodological rigour as established in the Consolidated Criteria for Reporting Qualitative Research (COREQ) domains (e.g. research team and reflexivity, study design, data analysis and findings).

Participants

Five participants were recruited via convenience sampling from an aphasia-meditation group offered at a University-based Adult Speech Pathology Clinic. Inclusion criteria included: (a) diagnosis of aphasia, (b) previous meditation experience, (c) proficient English speakers, (d) sufficient comprehension skills for interviews as indicated by the comprehension score on the Western Aphasia Battery – Revised Aphasia Quotient (WAB-R AQ; Kertesz, 2006), and (e) normal or aided hearing acuity as confirmed by the participant and the administering speech pathologist to participate in the interview process and member-check group. Only one participant (Laura) had meditation experience prior to her stroke; the remaining four participants were introduced to meditation at the Clinic, where the study was conducted, each joining a meditation course offered four years prior to this study and then attending semi-regular meditation courses at the Clinic over the four year period (see Table 1). Exclusion criteria included: (a) concomitant neurocognitive disorders resulting in cognitive impairment confirmed by the administering speech pathologist, (b) severe expressive and/ or receptive language difficulties preventing PwA from understanding interview questions as determined by WAB-R AQ, (c) no current episode of depression. While seven participants met the inclusion criteria, a total of five PwA (three male, two female; $M = 65.4$ years, $SD = 10.9$, range = 50-79 years) with chronic aphasia (> 1 year

post-stroke, $M = 7.4$, $SD = 3.8$) were recruited, the additional two participants declined due to the time commitment involved. Participant demographic information is set out in Table 1. Participant data from the WAB-R was collected over the previous two year period. All participant names have been replaced with non-identifiable pseudonyms.

[Insert Table 1 here.]

Previous Meditation Intervention

Four of the three participants (Derrick, Cameron, Renae, and Toby) had previously participated in two formal meditation programs (with the longest training duration of two weekly one-hour sessions over nine weeks [n=18hrs], and the shortest offered included three weekly one-hour sessions over three weeks [n=9hrs]) at the Clinic over two consecutive years. One participant (Laura) brought extensive meditation experience gained prior to her stroke (see Table 1), and only participated in one formal meditation program at the Clinic (the three week one). The formal meditation courses were evaluated and hence regular attendance was encouraged. The informal meditation sessions offered at the Clinic consisted of a regular weekly lunch time meditation that did not require regular attendance; attendance of the five participants included in this study was, however, both high and regular, regardless of formal or informal course offer. Informal lunch time meditation was offered four times a year over six weeks between 2017 and 2019 [n=72hrs]. Participants were always encouraged to practice meditation at home when any meditation course was offered, however, no numerical data was recorded around home practice, and it is therefore not captured in the total hours indicated here.

An experienced meditator, who is an aphasiologist with extensive personal meditation experience of over 15 years and has been working with people with aphasia and meditation techniques for 4.5 years, conducted the meditation sessions. The

following meditation techniques were used after a meet and greet phase (max. 10 minutes): (1) a guided body scan (max. 20 minutes) involving breathing into different areas of the body and raising awareness of the body, (2) guided breath counting (max. 10 minutes) where participants were instructed to clear their mind and count up to ten on each breath out, restarting with 'one' if they were interrupted by thoughts, and (3) attending to the auditory environment and 'letting sounds go' with each breath (guided and self-guided; max. 20 minutes). In-between and after meditation blocks, an opportunity to share reflections on the meditation practice was given (max. 15 minutes). Each session followed the same pattern and was informed by the mindfulness-based intervention protocol as outlined by Kabat-Zinn (2003). The group always met at the campus-based University Clinic.

Ethics Approval

Ethics approval was obtained from the University of Curtin Human Research Ethics Committee (HR08/2016-31) prior to recruitment. Written informed consent was sought through aphasia friendly information and consent forms provided both verbally and in writing.

Apparatus

Two simultaneous audio-recorders were used to record the interview sessions for later transcription. In addition to personal communication devices, such as iPads brought by the participants, pen and paper were made available to support conversation. The participants declined to be video-recorded when consenting to participate in our study, hence we did not use any video recording devices and followed recommendations of Dalemans et al. (2010).

Procedure

Pilot Interview

A pilot interview was conducted with an experienced Speech Pathologist and qualitative researcher to review interview content, style and communication strategies. Based on feedback, more probes were added, repetitive or leading questions were removed, and sentence length and rate of speech were reduced.

Individual Interviews with PwA. A semi-structured interview was conducted with each participant at the Clinic (see Appendix A). Each interview was approximately one hour in length, and led by the primary researcher (first author) and supported by an experienced Speech Pathologist. Participants were interviewed immediately following completion of a weekly lunch time meditation block at the Clinic, conducted over a 6 week period. To accommodate the participants' request not to be video-recorded and still capture other forms of communication, non-verbal actions (i.e., use of iPad, gestures, writing, drawing) were noted online by the researchers for subsequent inter-rater agreement of individual interview data, a procedure consistent with previous studies (e.g., Dalemans et al., 2010).

The interview framework was informed by Dalemans et al. (2010) and Luck and Rose (2007), with both verbal and non-verbal communication encouraged. A semi-structured interview approach was selected to be consistent with previous studies with PwA using phenomenological approaches (Luck & Rose, 2007; Tomkins et al., 2013). In line with Luck and Rose's (2007) suggestions for adapting semi-structured interviews for PwA, the interview guide was organised according to key open-ended topic questions, more specific open-ended questions, followed by closed ended probes to use when required to support PwA.

Focus Groups with PwA. Two focus groups (refer to Appendix B for guide) were conducted on separate occasions for 'member-checking' data from the individual interviews and explored any new themes in the group context. Both groups were

facilitated by the primary researcher, with the research team also present for the member-checking process. All five participants attended the first member-check group while only four participants attended on the second occasion; the participant who could not attend the second focus group reported they were satisfied and did not wish to reschedule an additional date or method for checking. Each member-check group was 90 minutes in length; the primary researcher verbally presented themes and de-identified quotes to prompt open discussion. All participants were encouraged to speak and/or communicate using gesture, drawing and writing as needed to facilitate participation. In the event of group members being dominant in the discussion, they were thanked for their input and the discussion reopened to the group or directed at a participant, who had attempted to speak previously. The general observation, however, was that participants facilitated and encouraged each other to share their experience about meditation, and commented on each other's experiences.

Data Analysis

The IPA process described by Smith, Flowers and Larkin (2009) was used to guide analysis of each transcript by the primary researcher and an independent peer. All verbal and non-verbal data was transcribed into NVivo 12 (QSR International, 2018) for each individual participant by the primary researcher, with all participant names replaced with pseudonyms. Figure 1 describes the complete steps applied to each transcript in accordance with Smith et al.'s (2009) guide. Table 2 provides details on each step, and Table 3 provides detailed measures taken to ensure qualitative rigour. Regarding reflexivity of the researchers, the interviewer had not met the participants prior to this study but was aware of meditation and its different techniques. She maintained a research diary to aid reflexivity in the study and to help bracket preconceived notions, pre-suppositions, and personal biases about meditation. This

facilitated an open, non-judgmental attitude to the participants' description of the phenomenon.

[Insert Figure 1 here.]

[Insert Table 2 here.]

[Insert Table 3 here.]

Results

Analysis of the interview transcriptions produced four super-ordinate organising themes and 17 sub-themes across all participants. In some instances, quotes have been presented as interview exchanges in order to provide context for clarity, especially when participants presented with language difficulties; full quotes are presented on separate lines while partial phrases/sentences are integrated and “italicised” in-text. An overview of the themes is set out in Figure 2. Each super-ordinate theme is presented as a separate figure before being discussed in detail . The number of individual participants associated with each emergent sub-theme is included within brackets in the Figures. The full set of responses is included in Table S1-S4 in the Supplementary Materials.

[Insert Figure 2 here.]

Learning to Meditate: A Gradual Journey

The first theme, *Learning to Meditate: A Gradual Journey*, describes the participants' accounts of their individual and shared learning processes including factors that facilitated their ability to meditate (see Figure 3).

[Insert Figure 3 here].

Three of the five participants described the process of learning meditation to be initially difficult. This was particularly apparent during tasks, such as breath counting, which required the participants to maintain sustained attention and focus on ten deep breaths.

Toby reported that he would often fall asleep:

Really it was hard because early on, I did a lot of... I went to bed [makes snoring sound].

Similarly, Cameron recalled that, '*by the time I'm on to '2' it's all over*', and found that his mind would, '*keep wandering off, with football or cricket or anything, anything except what I'm supposed to be doing*'. Renae also echoed this in her description: '*Uh... '1' and '2' and '3'...ohhh [closes eyes]...no' [shakes head, opens eyes]*'.

Despite the collective initial difficulties for the three participants, the time taken to develop the skills and focus to meditate varied. Toby had offered, '*it took me easily six months*'. Conversely, for Cameron, the ability to meditate took much longer: '*I mean now it's good, but it's taken two years.*' Additionally, it was found that despite the differences in the time taken to meditate successfully amongst the participants, the actual moment of success was described as being a sudden discovery for both Toby and Cameron respectively:

Toby: Basically: it's not really working, and then it was.

Cameron: I thought it was going to be like all the other times, but it wasn't.

Regardless of the almost sudden nature of discovery, the lead up to that moment was described as a gradual, practiced process: *'The thing is the repetition going in and eventually it just clicks.'* (Toby); *'For me? Oh it was gradual, it was yes...Few years back, but gradual.'* (Laura)

Participants Renae and Toby reported that the role of the meditation facilitator was crucial for supporting this learning journey:

Renae: Um...X...oh...um [meditation facilitator's name repeated twice]. And [gestures emphatically to facilitator, nods].

Interviewer: So it was her guidance?

Renae: Yes, yes [nods emphatically].

Toby continued to use the facilitator's voice in order to assist meditation outside the group:

Toby: I use the breath and I'm always thinking about you [referring to meditation facilitator] at home - it's a purpose. So, either she's here or she's not, but she's putting me in the zone.

Interviewer: But you can do it by yourself by listening to your own breath?

Toby: Yeah, but I'm using her instructions.

Interviewer: Just in your memory?

Toby: Yes.

Similarly, all five participants reported developing individually unique preferences for meditation techniques that increased their ease of entering the meditative state (see Figure 2A for relatively even preference for listening to sounds, breath counting, body scan and visualisation of images):

Toby: See I'm... I love the counting...

Renae: Yeah!

Toby: Even when you say don't count [to Interviewer], I'd go ahead and count.

Interviewer: So even if I said, scan the body, you'd count?

Toby: Yeah, I'd count, that's because, that works really well with me.

Laura: I liked the body scan, forgot to count, it's and- I was just lost- didn't hear the wood chipping or anything [...] But I prefer just the body scan to listening to the rain or birds or anything.

Cameron: Sometimes I'll come here and nothing works and sometimes I'll come here and the birds were singing and it's raining or something...

Derrick: The rain.

Interviewer: So listening to the sounds.

The importance of practice is therefore expressed in this first theme across three participants.

Defining the Meditation Experience

The second super-ordinate theme related to *Defining the Meditation Experience* (see Figure 4). Participants reported a range of mutually agreed upon and individually unique associations to meditation to describe the ways in which it is personally meaningful to them.

[Insert Figure 4 here.]

As mentioned under theme 1, participating in an activity not related to stroke and in which other members of the community were engaged, set the scene for three participants. For Toby, this was apparent during his recount of a conversational exchange at the gym:

One of the people comes over to me and she says: 'hey guess what, I did some meditation last night'. And he goes: 'it's great'. And you know, that meant a lot to me, here's somebody that's sane... well... better and taking meditation and it's working and 'I feel great'... bang.

The view of engaging in an activity that did not specifically focus on aphasia and did not require language output was seen in Renae's interview. Here, given her language difficulties,

this view is offered by the interviewer in response to her observed attempts to communicate and then verified multiple times with emphatic agreement:

Renaë: Um...meditation...aphasia...uh...[writes 'six years' between a backwards arrow and a forwards arrow]. [Points to backward arrow, gestures to arm] ... no, no, no. [Points to forward arrow] meditation.

Interviewer: Can I try? Tell me if I'm wrong. Is it perhaps that meditation doesn't focus on 'oh I can't find the word', 'oh I can't move the arm', it actually drops away, because you're focusing on something else to learn together, so it doesn't matter?

Renaë: Yes, yep [nods]

Interviewer: It's not focused on what you can't do.

Renaë: Yes, yes, yes.

This perspective was also corroborated by Derrick during the member-check focus group:

Interviewer: So coming together and learning a new skill, and it didn't matter if you had aphasia or you didn't have aphasia, you were just sitting together and learning a new skill together.

Derrick: Yeah, yeah.

Additionally, for Toby, meditation was also seen as a break; he described the activity as 'giving yourself some breathing room'. Similarly, Laura described it as a way to escape her hectic quotidian:

I think it's important, instead of racing around, I tend to be racing around because there's a few things I need to know... to study... um that you get caught up in the hurly-burly. So it's really nice just to be there and relax, yeah.

This concept of meditation being a break was also confirmed by Laura and Toby during the member-check focus group and additionally agreed on as being a part of Derrick's experience as well:

Interviewer: ...So it was described as a respite or break from the day. Do people agree or relate to that?

Toby: I would agree with that.

Derrick: Yeah

Laura: Definitely.

Moreover, Laura, who was the only one in the group who had extensive experience with meditation prior to her stroke, and Toby, who had been consistently meditating for over two years, including home practice, both described meditation as an experience that was deeply immersive, to the extent that Toby's depiction of meditation was, '*a fine line between being "there" and being asleep*', and Laura was able to detail the discernible shift in her awareness of the external:

I'm aware of things outside, but sometimes I'm not aware, I just meditate.

It has this effect on me, that I find quite profound, because I can go quite deeply in prayer, quite deeply in meditation, too.

Individual associations with meditation were also reported, and comprised a number of unique descriptions. One association was not unlike the experience of deep immersion where Laura expressed a relationship between spirituality and meditation: '*meditation is a prayer*' and that to '*meditate... prayer, to me, they're one and the same*'. Another such association for Laura was between meditation and ipseity: '*You're taking time out to just be yourself*'. Likewise, Derrick had also formed a unique, personal association with meditation; for him meditation was interrelated with nature:

Interviewer: How would you describe it? What it means to you [meditation]?

Derrick: [Draws picture of potted flower].

Interviewer: It's a plant or a flower?

Derrick: Flower...I guess... orchid. Orchid and red, no...purple. Purple, purple, purple. Um and white. White. Yeah.

Interviewer: So if you had to describe meditation to someone, it would be like imagining flowers?

Derrick: Yeah... yeah...

Interviewer: Do you always visualise something in your mind when you meditate?

Derrick: I guess...always.

Interviewer: So when we asked you to describe meditation you drew a flower. That's very interesting. Do you associate plants and nature with meditation?

Derrick: Yeah, yeah.

Experience of Meditating in a Group

The *Experience of Meditating in a Group* was the third theme identified, influencing participants' learning and attendance (see Figure 5).

[Insert Figure 5 here.]

All participants reported that the group members were important to their meditation experience:

I feel really pleased when I see them and that's the only thing, I've got these other projects... I miss not seeing them you know. I always think of them. (Laura)

Additionally, two participants attributed joining the group to the reason behind their continued attendance. This was particularly the case for Cameron, despite him saying, '*With meditation I would think of anything to get out of it... I used do that*'. When asked to explain what contributed to his perseverance with meditation, he reported, '*It might be people maybe. It's the only thing I can think of*' and described them as being '*a big help*'.

This was also reflected in Toby's account:

Cause we get going because it's the group and everybody... then we can sit down and experience. It's really the group that keeps me here, you know.

Similarly, Laura reported that she '*found doing group quite beneficial*', on account of the social aspects of the group experience:

I'm quite a social person, I enjoy that aspect of doing it as a group. And also, hearing about the experiences of how the others were relating to the meditation.

Moreover, for Cameron, the group also served as an opportunity for social engagement:

When I go home, I just don't talk to anyone and I... I don't. Unless I've got to answer a question, otherwise I won't talk. That's a shame but... I know I'll make a fuck-up of it...

Participants also reported that the group meditation experience was influenced by the way they related to one another and the overall dynamics amongst the group members. When Cameron was experiencing difficulties with meditation, he described the encouragement he received from Renae as:

She keeps going to me you've got it [state of meditation], you've got it... no I haven't, but she keeps telling me I have.

This encouragement and empathy was also seen to expand to their broader, shared experience of aphasia:

Laura: With helping each other, well... we're all in the same, had strokes, um some more fortunate or blessed than others, but we understand each other.

For Derrick, meditating within a group of people that had a shared context was important to him:

Interviewer: How important was it to have a group of people with aphasia meditating?

Derrick: Yes.

Interviewer: Are you saying having a group of people with aphasia meditating was important?

Derrick: Yes, yes.

Interviewer: Cause you all shared that?

Derrick: Yes, aphasia and [name of meditation facilitator].

Despite group meditation being important to both Toby and Laura, they noted that the process of entering into the meditative state was not dependent on the group. Laura reported that she ‘*Can do it at home as well... I don’t rely on them to meditate*’. Toby similarly reported:

You have some nice conversation, you go in and get into the meditation, basically goodbye and then bang. So it’s not... meditation isn’t sort of um, you don’t need that stuff because it’s in here [gestures to head] it’s all in here.

Conversely, for Cameron, the group was reported to be necessary for entering the meditative state:

I tried by myself but I couldn’t get it, you know, it’s the only place I can get it.

Nevertheless, during the group member-check interviews, it was imperative for both Toby and Laura that the researchers understood that, regardless of their ability to meditate within or outside the group, meditating in a group was important to their experience. Laura stated, ‘*You draw from the group an energy*’.

Perceived Effects of Meditation

Participants reported a range of specific *Perceived Effects of Meditation* and the degree to which these effects have impacted their lives (see Figure 6).

[Insert Figure 6 here.]

Four participants reported that meditation contributed to their recovery journey through the development of an acceptance that allowed them to move forward. Laura with

her meditation experience, described meditation as having a ‘*more general*’ effect over her life; in particular, she described it as, ‘*A form of my living, that acceptance, and probably it’s due to the meditation*’ and added:

By accepting a situation, it gives you, I feel, the step up to “well here I am, where do I go from here”, that’s what meditation, I feel, can do for a person.

Meditation allowed participants to see their own progress:

Toby: If I look at my head I’m way down here when I should be way up there, and so this has been allowing me to sit down and make a jump.

Meditation encouraged Toby to shift away from focusing only on his stroke symptoms:

Toby: Well the thing is that each day I’m... I know I’m going like that [moves hands upwards], I’m constantly going up. So you’re doing stroke and you’re only looking at stroke not the other things.

Interviewer: So it’s not just time it’s also having your mind on something else?

Toby: Yeah, so once you can do that... boom.

Another participant also experienced this when the topic of meditation and self-acceptance was brought up during a group member-check focus group:

Rena: Yeah. But, um...yeah...um...leg and arm and oh yay!

Interviewer: Hmm, let me know if I’m wrong... but is that like, self-acceptance in what you can do?

Rena: Yeah! [Draws wheelchair].

Interviewer: Sitting in a wheelchair?

Rena: Yeah, and...then yay!

Interviewer: Progress, hmm

Rena: Yep, yep.

In addition to this shift in perspective aided by meditation, according to Toby, it also contributed towards managing negative emotions like anger post-stroke:

Toby: Because I know I feel different now. Before I started this whole thing now I used to be angry, now it's all ssssssss.

Interviewer: How would you describe it... dealing with the anger?

Toby: It nullifies it.

This was also substantiated by Cameron and the perspectives of the other group members on Cameron's change in behaviour during a focus group:

Toby: You know before we started here, he was absolutely diabolical...

Cameron: Yeah, I was, yeah...

Toby: And then all of a sudden, now, he's very (unintelligible), he's going very peacefully through this and I think is really good.

Cameron: I was really...I just couldn't work out why I had this thing here [refers to hemiplegic arm] ... why me you know...anyway.

For Laura, she attributed the use of meditation as a tool to overcome the fear of having another stroke:

For me, it was quite definite. For me, when I had the stroke, my greatest fear was having another stroke and I'm on my own. So I didn't know if I had stroke what I would do. But the meditation made me definitely, I know that, get over my fear. It was amazing. I just don't think of it anymore.

Similarly, for Toby, the sense of acceptance that he achieved in part from meditation extended beyond acceptance of his circumstances and nullification of his anger: '*meditation when it's done... I think it gave me a way to speak*'. Toby illustrated this through an anecdotal recount of a movie night with his family, where he engaged in conversation, when previously he would not have done this:

Before I was doing meditation, I'll just be...nothing, and if it was something... I don't think anything did come to pass... I didn't bring it up. Now that I've had meditation and everything else to do it, I'm saying, you know, I'm... I laughed! I haven't done that in a long time, you know. So is it meditation? Yeah, and it's a lot of other things too, but it's all there.

In addition to acceptance, according to Laura and Toby, meditation also contributed to the development of resilience:

Laura: So this is the thing with my meditation making... I am resilient... but the meditation also, because I pray and I've meditated before, not just here, but before my stroke... so it makes me just think of 'where to next'. Yeah, so I think that's what meditation has done for me over the past years, because it's not just now or just after my stroke.

In contrast to Laura's years of meditation contributing to her general resilience, Toby described meditation as a form of resilience which helped to prevent negative emotions or thoughts related to his deficits:

I'm sure I've got bad thoughts somewhere, but they ain't there now. It really is good. The whole day is new, it's different, I know I'm not getting a lot from the day because of what's going on, but for me it's giving that grounding and then you can go off through the day. It was like nothing will come in like, because it's there, you know.

Alongside acceptance and resilience, all five participants also shared the experience of being relaxed or calmed by meditation:

Laura: When the meditation was introduced, I found that it did give me a calmness... Definitely very calm, yeah, yeah. It sets me up for the day.

Toby: Once you do it you can just stop go 'yay, hey-hey-hey' [very relaxed, pleased facial expression; waves hand].

Interviewer: What made you get involved with the meditation group?

Derrick: Yeah well, just, lovely and [sits back in his chair, closes eyes, lets arms hang by sides].

Interviewer: So you came to be relaxed?

Derrick: Yes, yes.

Renaë: Yeah..um...[leans back in chair, closes eyes]

Interviewer: Relaxing?

Renaë: Yes! Yep.

Renaë also described meditation as an opportunity to reduce stress from the day before sleeping:

Renaë: ...[writes on paper] 1-2-3-4.

Interviewer: Ah, is this the breath counting?

Renaë: Yes, um...bed and uh [writes: 'bed', number 'ten' 6 times in a row].

Interviewer: Till you get to 10?

Interviewer: A couple of rounds?

Renaë: Yep, yep.

Renaë:.. um..bed..[closed eyes, leans back, big exhale through mouth] stress..

ohhh [smiles with eyes closed], yep.

In addition to this calming effect, Laura and Toby, respectively, also described feeling more alert subsequent to meditation:

Laura: After the calmness, I feel alert, yeah. I'm ready to go... to meet the day .

Toby: It's just basically, it's all of a sudden I'm alert and I just go through it.

However, despite the common experience of feeling relaxed, calm or alert, the length of these perceived effects varied considerably across participants. Toby's reported effects of meditation 'goes through the whole day', while for Cameron it, 'Stops when I walk out',

similar to Renae: *Straight after...but um [writes 2 hours] but then ohh God*. Meanwhile for Laura, she explained the effect was: *'More general'* over her life.

Discussion

This study aimed, first, to develop an understanding of the lived experiences of PwA with meditation and, second, to explore whether participants perceived any impact from meditation on their aphasia. The study identified four super-ordinate themes relating to: the shared and individual processes involved in learning meditation (theme 1 – *learning to meditate*); the conceptualisation of meditation (theme 2 - *defining the meditation experience*); the impact of being in a group (theme 3 – *experience of meditating in a group*); and the perceived psychosocial benefits of meditation (theme 4 – *effects of meditation*). Findings within these themes are drawn on below to underpin an integrated discussion of the perceptions of the PwA in the study, and develop early, but critical, insights into the impact of meditation for this client group.

Individual Variability in Learning Meditation

Meditation is an approach which requires time and is learned, requiring gradual and repetitive practice in order to adequately sustain attention and enter into the meditative state. Even with the small numbers in this study, individual variation was seen with regards to the length of time taken to learn meditation. Previous studies on meditation with PwA (Laures-Gore & Marshall, 2016; Marshall et al., 2017; Orenstein et al., 2012) provided an equal number of meditation sessions for each client, measuring the effect of meditation through objective standardised attention, anxiety or language measures. These studies did not set out to monitor whether each participant was meditating successfully each session through, for example, the inclusion of a qualitative component; the personalised and individual experiences related to individuals learning to meditate were not captured. Considering that

meditation is an internalised process (Sedlmeier et al., 2018), it is important that intervention studies consider methods of monitoring whether participants are successfully entering the meditative state, recognising the variability in time engaged in the early learning process reported here. Interestingly, Garrett et al.'s (2011) study on the lived experience with yoga after stroke, where the last element of the 10 week yoga training included a meditative component, also highlighted this theme despite their study being carried out over a shorter period of meditation training compared to our study.

Preference for Specific Meditation Techniques

Variability was also seen in preference to meditation techniques. All five participants reported that they had developed personal preferences for specific meditation techniques, to the extent that one participant exclusively implemented one technique to successfully enter the meditative state, even during the period of instruction of an alternative technique by the meditation facilitator. Given the earlier findings that not all techniques are learnt as easily as others and preferences vary, we suggest that it is important that meditation programs introduce a range of meditation techniques to participants to cater for personal preferences, rather than assuming that everyone would be able to meditate using only one approach.

Reduced Focus on Language Impairment

Another key finding was that the lack of focus in meditation on physical or linguistic impairments was meaningful for the participants in the study. As meditation does not require participants to talk or be physically active, it allowed the participants to shift their focus away from their impairments and focus on learning a new way of *being in the moment*. As Laura states Laura: *When I meditate, you're taking time out to just be yourself, just be calm and forget about other things.*" (see Suppl. Materials 2).

However, it remains an open question whether this shift was caused by an intervention that was not language-focused or because the participants themselves were no

longer focused on their language recovery. While the truth probably lies in both possibilities, the data currently points to the importance of shifting attention away from word finding towards accepting the situation as it arises.

However, we also acknowledge, that this reduced focus from the impairment is notably different to overcoming a deficit in a rehabilitation context. It is a finding reflected in the results of other studies, such as that of Luiggi-Hernandez et al. (2017) which considered meditation and chronic pain. Additionally, as meditation is also practised in non-clinical populations, it was felt to be normalising and an opportunity to work on something unrelated directly to the stigma of disability. Previous studies have shown that although some PwA eventually accept the reality of a chronic illness, the goal of escaping their disability or returning to a normal life is common (Worrall et al., 2011). Further, an earlier study exploring factors that contribute to living successfully with aphasia included engaging in both communication or non-communication based activities in order to procure a sense of normality and/or achievement (Brown, Worrall, Davidson, & Howe, 2011). Meditation may therefore offer an alternative approach to therapy for PwA facilitating a more positive perspective of the self. As such, it may be considered as a complementary approach to traditional language therapy.

Importance of the Group Experience

All participants in this study noted that being with the other group members was an important aspect of their meditation experience. In particular, the overall supportive and encouraging nature of the group, along with the shared understanding of aphasia, contributed positively to social dynamics. Being part of a group encouraged attendance and one participant reported being reliant on being with the group in order to meditate. These results are consistent with previous research on the benefits of group intervention with PwA (Lanyon et al., 2018; Ross, Winslow, Marchant, & Brumfitt, 2006), which positively promote social

and life participation, domains of life often impacted by cognitive-linguistic or physical impairments (Brown et al., 2011; Ross et al., 2006). These results further indicate that meditation interventions for PwA may be more beneficial if delivered in a group setting rather than individually. It is noteworthy that Toby's reflection (*'it is really the group that keeps me here'*) might raise the possibility that any group would be useful to people with aphasia. Together, however, with the other themes of participants reporting experience of grounding, calmness, dealing with fear and anger (i.e. resilience), and self-acceptance when meditating, these themes are not typically explained by the social group aspects, but go beyond the group experience to suggest that elements of both group experience and the practice of meditation work together to be effective. A quantitative study would be a useful next step to explore this potential accumulated effect.

Summary of Perceived Impacts of Meditation from the Lived Experience

This study explicitly sought to gain insight into any perceived changes on aspects of aphasia associated with practising meditation, obtaining examples of evidence where these may have occurred. In terms of behavioural impacts from meditation, few perceived impacts on language functioning were reported. Perceived psychosocial benefits of meditation, however, were frequent and consistent, especially regarding key themes of acceptance, building resilience, and feeling relaxed, calm and/or alert that extended beyond sessions. Findings that meditation, when practiced successfully, led to feeling more calm or alert are consistent with Goyal et al.'s (2014) systematic review of meditation programs used with varied clinical adult populations, which reported small to moderate effects in reducing multiple domains of psychological stress. With regards to feeling alert after meditation, this may be reflective of Jha, Krompiger, and Baime's (2007) findings of improvements to the ventral attention sub-system of healthy experienced meditators which resulted in increased alertness or wakefulness. We acknowledge, however, that the cohort of PwA in this study

presented with no reported current depression. This is noteworthy given that caution should be exercised when using meditation in case trauma or a severe depression is present, as previous studies have reported challenges with meditation for these populations (Lindahl et al., 2017). Meditation can in these instances be counterproductive, causing rumination or resurfacing of the traumatic event. Hence, it has been suggested that slow movement, such as yoga, qi gong or slow walking, has been shown to be of greater potential benefit to avoid rumination and re-living negative experiences that can emerge when practising ‘stillness’ (see Lindahl et al., 2017 for a review, and Baker et al., 2018 for a related systematic review on depression after stroke).

Despite the length of the effects of meditation reportedly varying according to the individual, the perceived improvement in psychosocial well-being is promising as it is an area of post-stroke and aphasia care that is often overlooked despite having an important role in rehabilitation (Brown et al., 2011; Code & Hermann, 2003). Moreover, with one participant making a clear link between meditation and prayer, this work suggests that meditation may have potential to combine with a spiritual approach, an aspect that has been linked to holistic care and has been previously under-recognised (Mathisen et al., 2015). All participants reported or confirmed that meditation allowed them to experience a sense of acceptance over their circumstances or abilities by shifting their focus from stroke and its consequences towards progress, with findings further suggesting meditation could reduce negative emotional states such as anger and improve mood and the inclination to socialise. These results are consistent with data from healthy long-term meditators with large effect sizes on social interaction and relationships, emotional regulation and improved socio-emotional wellbeing (Goyal et al., 2014; Luberto et al., 2018; Sedlmeier et al., 2018). This theme of acceptance was also reflected in Chadwick et al.’s (2011) outcomes with bipolar disorder, and improvements in emotional-wellbeing supporting findings reported by

Dickinson et al. (2017) in their single case study of a PwA. When considered within the framework of a model of post-stroke emotional adjustment (Taylor et al., 2011), meditation appears to contribute to adjustment through an acceptance of the disparity between pre- and post-stroke abilities and views on achievable progress.

Limitations

The small sample size is a limitation although accepted in phenomenological studies which focus on individual experiences. Additionally, it needs to be acknowledged that severity of aphasia can make it hard to collect detailed quotes. Hence, the two participants who were the least impaired, Laura and Toby, contributed richer verbal data in their one-to-one interviews compared to other participants. During the focus groups, we minimized this inherent difficulty with balancing comments from everyone by including the detail of non-verbal responses from all participants and ensuring that opportunities were available for all to contribute to the discussion in the group. As we mentioned above, the general observation was that participants encouraged each other during the focus groups to share their experiences about meditation, commenting on each other's experiences and progress over time.

There are a number of other ways in which this study may have been strengthened. Interviews with family members, as in previous studies (Dalemans et al., 2010; Luck & Rose, 2007), may have provided an opportunity to triangulate the findings as well as stimulate other topics. All participants, however, independently attended the meditation sessions, reducing both access to and convenience for family to be involved, with three of the participants living alone.

Conclusion

This study explored the lived experiences of meditation for people with chronic aphasia and investigated perceived behavioural impact on their aphasia associated with the meditation practice. The study found that the delivery of meditation in a group context positively impacted the meditation experience due to the social opportunities and shared understanding of aphasia. Furthermore, the study found that meditation as a practice is experienced differently by each person, both in the time taken to engage with the process and in preferred techniques, but appears nevertheless to be meaningful to PwA, not least by its ability to focus away from impairments. Meditation also reportedly contributed to the post-stroke acceptance process and subsequently allowed a shift in perspective from a disability and limitation focus towards progress, a strength-based focus. Additionally, PwA reported that meditation allowed them to relax, become calm and or feel alert, which may be a useful ‘state of mind’ to facilitate linguistic performance. The potential for meditation to enable a PwA who has underlying anxiety about their communication to overcome this warrants future investigation. While collectively these perceived impacts of meditation were experienced as beneficial for wellbeing, further research is also warranted to explore how meditation could assist during the post-stroke rehabilitative journey for people with aphasia.

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International Journal for Quality in Health Care; Volume 19, Number 6: pp. 349–357

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Table 1.*Demographic Data of Participants.*

Participant	Age	Post onset (years) (M: 7.4; SD: 3.8)	Aphasia Severity WAB-R AQ	Compre- hension Score	Spontaneous Speech Fluency	Living with Spouse/ Partner	Meditation Experience pre-/ post- stroke
Derrick	72	14	54.17 moderate, non-fluent (Broca)	9	2	yes	0 / 4yrs
Cameron	64	7	78.33 mild, fluent (Anomic)	9	5	no	0/ 4yrs
Laura	79	5	96.67 mild, fluent (Anomic)	10	9	no	10/5yrs
Toby	62	5	81.67 mild, fluent (Anomic)	9	8	yes	0/4yrs
Renaë	50	6	49.17 moderate, non-fluent (Broca)	10	2	yes	0/4yrs

Note. Aphasia type and severity, and Comprehension and Spontaneous Speech Fluency scores determined via Western Aphasia Battery-Revised (WAB-R) scores and Aphasia Quotient (AQ) (Kertesz, 2006); Scores: 1 = low, 10 = normal. Average years post-onset of stroke across all participants were 7.4 years (SD: 3.8).

Table 2.

Detailed application of IPA approach (Smith et al., 2009).

Step	Process
1	Multiple readings of the transcript as a whole in order for coders to be immersed in the data and gain a sense of the content.
2	Free textual analysis of each transcript with comprehensive initial notations and exploratory comments on significant statements. Both coders independently analysed each transcript with steps one to two; a consensus meeting was held to discuss differences and similarities on significant statements selected and subsequent meaning attributed to each in order to eventually reach agreement. 98% inter-rater agreement for steps 1 and 2; coders agreed on 263/268 statements across all participants and then reached consensus on five statements.
3	Derivation of emergent themes for each transcript through collation and sorting of all comments. Sorting of comments was carried out by the two researchers independently before, being reviewed for consensus for overlapping or incongruent groupings; emergent themes were labelled.
4	Sorting of finalised emergent themes under super-ordinate themes. Grouping of finalised emergent themes implemented independently by each coder; reviewed for consensus; super-ordinate themes were labelled.
5	A supervisor, an expert in qualitative IPA research with PwA, reviewed the individual analysis and consensus data from steps one to four for meaningfulness and consistency of codes, and confirmed the appropriate application of IPA for each transcript. After steps 1-5 were implemented for each transcript, the student researcher reviewed all super-ordinate themes across transcripts and collated recurrent themes at group level to present at the focus group at Step 6. All super-ordinate and emergent themes at group level were additionally reviewed by two supervisors to eliminate redundancy and clarify super-ordinate theme titles.
6	Validation of the findings from participants were sought at two member-check focus groups where de-identified findings from the interviews were discussed with participants. Agreements, disagreements and new findings were discussed with each individual participant within the group context, which allowed exploration of themes at both an individual and group level.

Table 3.*Qualitative rigour (Smith et al., 2009).*

Area	Process
Credibility	The interviewer maintained a research diary to bracket preconceived notions, pre-suppositions, and personal biases to separate presuppositions from the participants' description of the phenomenon. In developing the interview guides, recommendations from both the qualitative literature with PwA and the supervisory team experienced in qualitative aphasia research were considered. The interviews were co-facilitated by an experienced Speech Pathologist and appropriate communication strategies were implemented and clarifications were sought and confirmed online before moving onto subsequent topics or questions. Throughout the interview, it was stressed that the purpose of the interview was to gain a perspective of <i>their</i> meditation experience. Both interviewers also took notes on non-verbal information for inter-rater agreement that were discussed until consensus was reached.
Dependability	Two researchers independently analysed each transcript for inter-rater agreement. A member of the supervisory team who is an expert in IPA also reviewed all analyses and codes to ensure accurate and consistent implementation of the approach.
Confirmability	The process of confirmability was carried out through the individual interviews through repeatedly clarifying; member-check focus group were conducted with PwA to validate findings from the individual interviews.
Transferability	Although de-identified participant demographic data detailing aphasia type and severity was included for each case analysis, transferability will still be limited due to the small sample size.

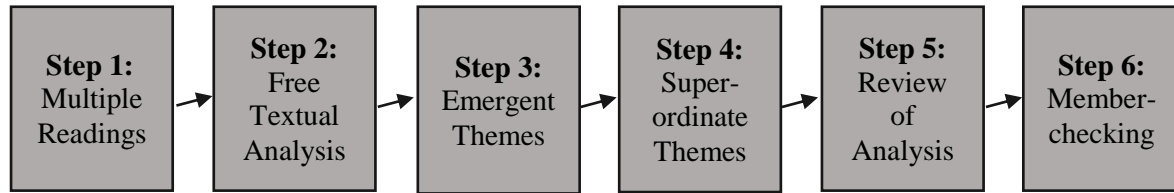


Figure 1. Steps to IPA approach as described in Smith et al. (2009).

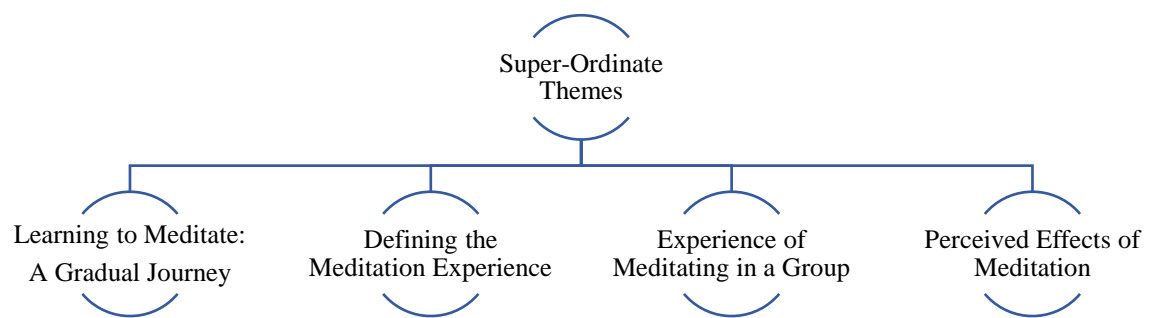


Figure 2. *Overview of the four super-ordinate themes.*

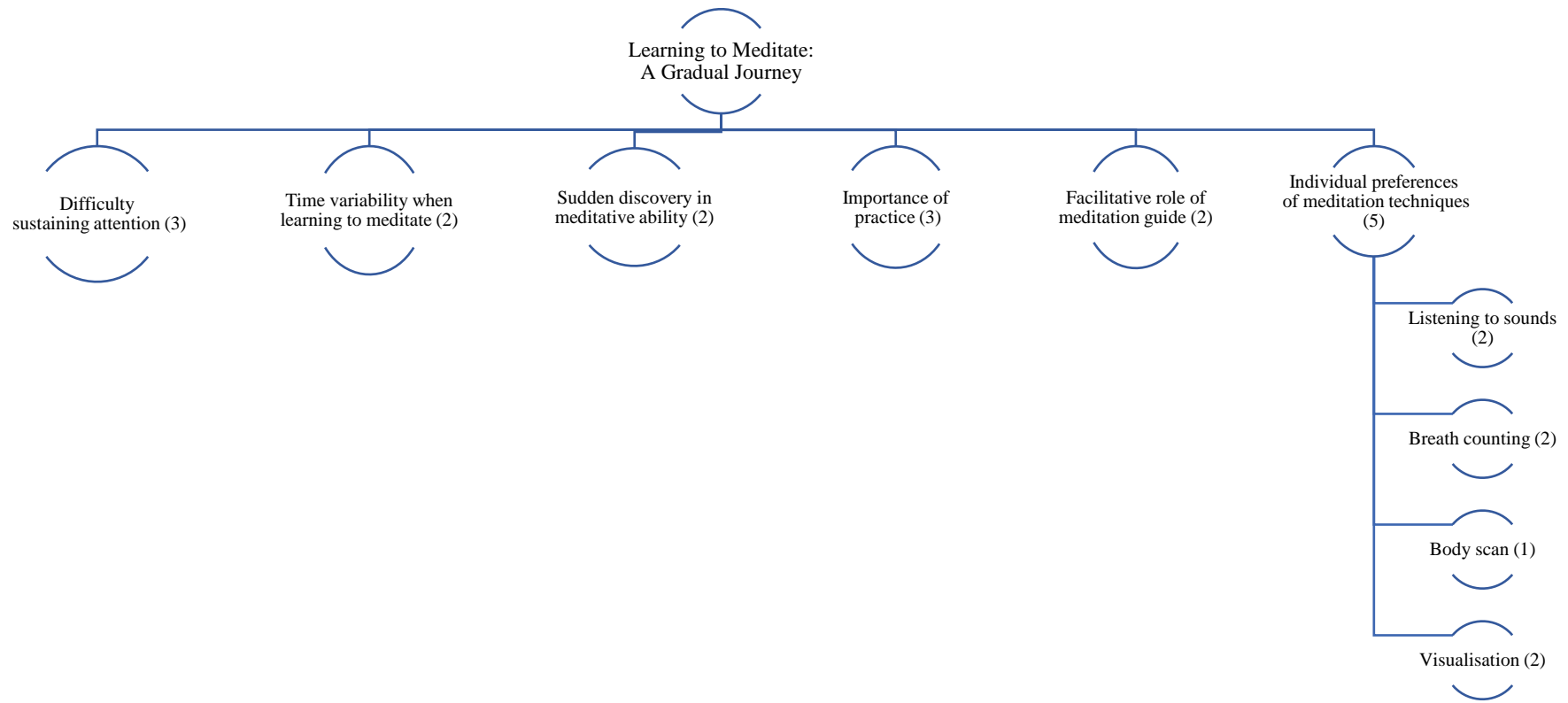


Figure 3. Overview of super-ordinate theme “Learning to Meditate: A Gradual Journey” with associated emergent and developing themes.

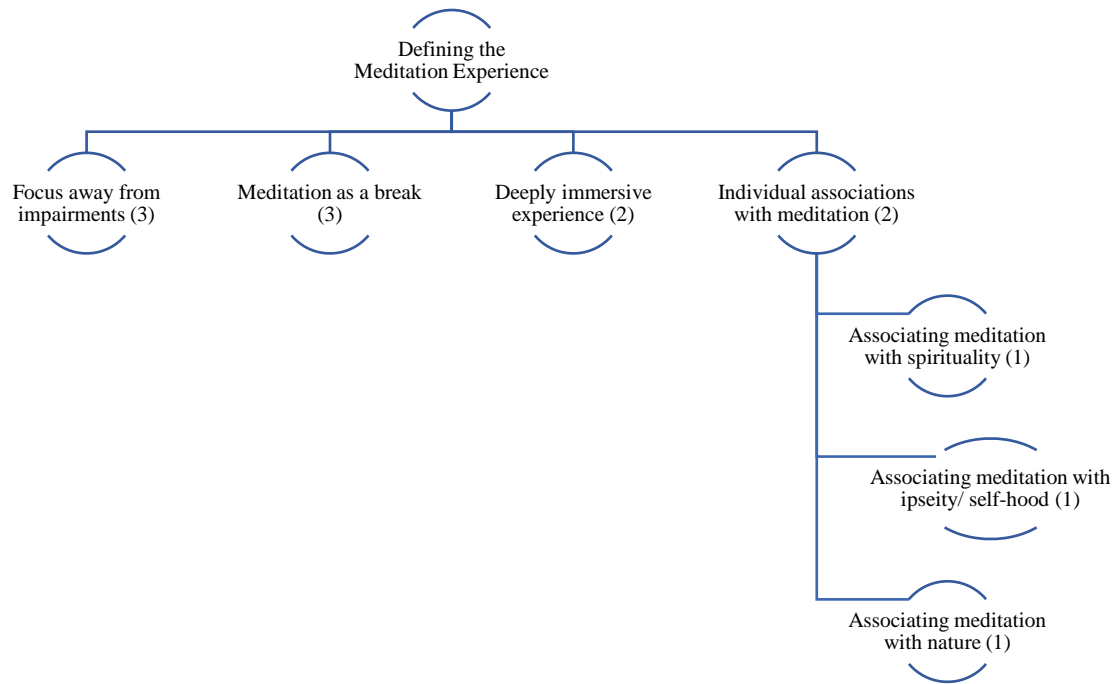


Figure 4. Overview of super-ordinate theme “Defining the Meditation Experience” with emergent and developing themes.

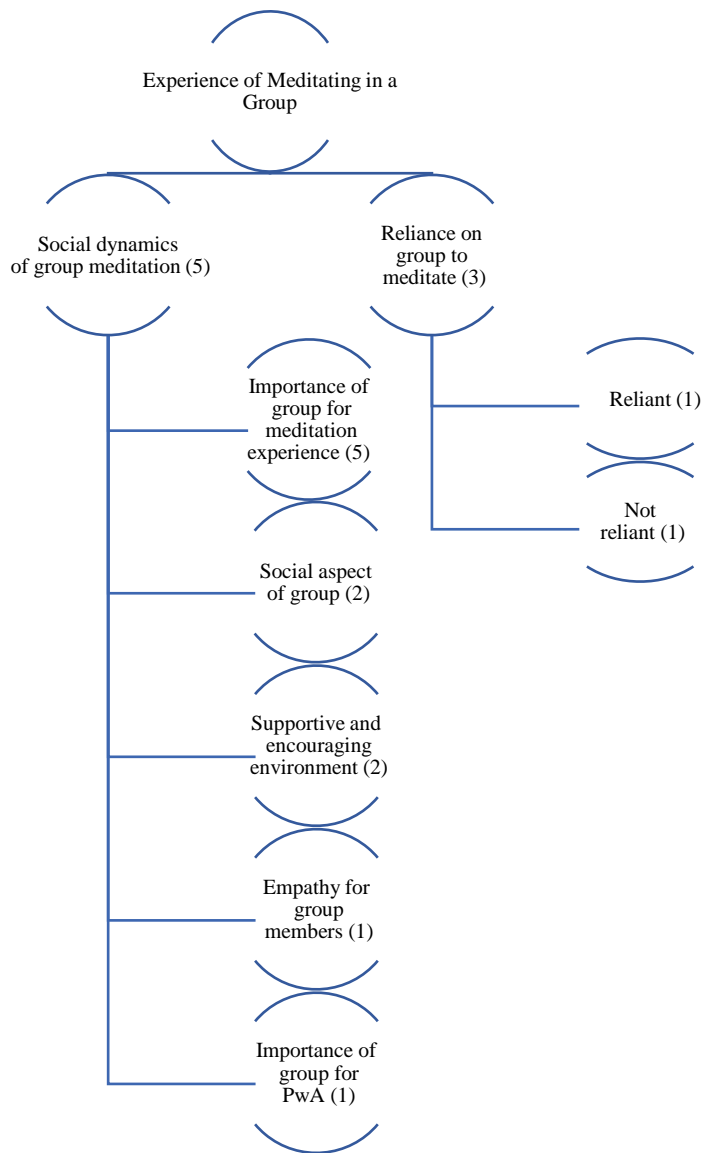


Figure 5. Overview of super-ordinate theme “Experience of Meditating in a Group” with emergent and developing themes.

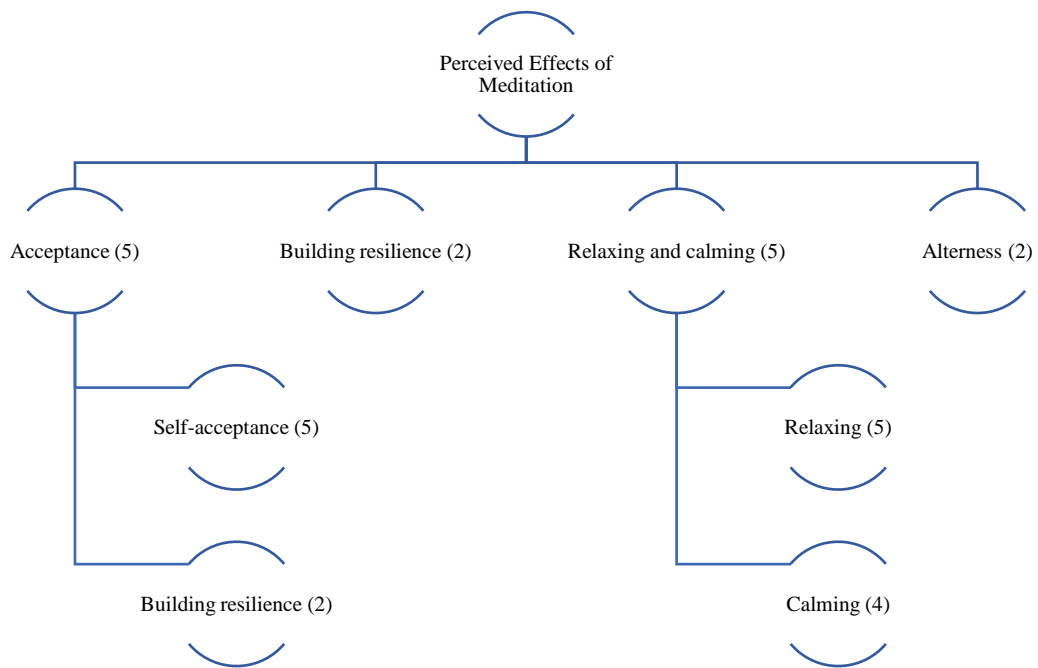


Figure 6. Overview of super-ordinate theme “Perceived Effects of Meditation” with emergent and developing themes.

Appendix A

Semi-structured interview guide for individuals with aphasia

<p>Interview Aim:</p> <p>To explore how persons with aphasia (PWA) experience mindfulness meditation practices and to gain insight into its impact on their lives.</p>							
<p>Topic Areas:</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">Overall impression of meditation</td> <td style="width: 33%;">First impressions/ preconceptions</td> <td style="width: 33%;">Impact of mediation</td> </tr> <tr> <td>Ease of learning meditation</td> <td>Timing</td> <td>Group Meditation</td> <td>Use of meditation</td> </tr> </table>	Overall impression of meditation	First impressions/ preconceptions	Impact of mediation	Ease of learning meditation	Timing	Group Meditation	Use of meditation
Overall impression of meditation	First impressions/ preconceptions	Impact of mediation					
Ease of learning meditation	Timing	Group Meditation	Use of meditation				
<p>Topic 1: OVERALL IMPRESSION OF MEDITATION</p> <ul style="list-style-type: none"> • Tell me about your experience of meditation. <p><i>[Tell me all or anything about your experience of coming to Curtin and learning meditation].</i></p>							
<p>Topic 2: FIRST IMPRESSION OF MEDITATION</p> <ul style="list-style-type: none"> • What had been your experience of meditation before the meditation group? • What were your views on meditation before you began meditating? <p>Probes:</p> <ul style="list-style-type: none"> - Did you have any views on meditation when you started? - Were they positive, negative or neutral? <ul style="list-style-type: none"> • How do you remember your first meditation experience? <p>Probes:</p> <ul style="list-style-type: none"> -How would you describe it? 							
<p>Topic 3: EASE OF LEARNING MEDITATION</p> <ul style="list-style-type: none"> • When you first started meditating, can you talk about how easy or difficult it was to learn? <p>Probes:</p> <ul style="list-style-type: none"> - What part of learning to meditate was easy? - What was more difficult? - Can you tell me more about this? 							
<p>Topic 4: IMPACT OF MEDITATION</p>							

- How do you feel meditation has affected you / has had an impact on you? If it had an impact.

Probes:

- How has it affected you specifically?

- In your experience, how does the meditation impact on you as someone with aphasia?

ATTENTION / COMPREHENSION

- Has it had any impact /effect on the way you understand people?

Probes:

- Has it affected the way you listen to other people?

- Do you find it easier/harder to talk to people?

Probes:

- Tell me more about that, how has it made it easier/ harder to talk to people?

- Any effect on the way you focus on conversations?

Probes:

-Tell me more about that, how has it effected the way you focus on conversations?

Further Probes:

- One-to-one conversations?
- What about group conversations?
- Phone conversations?

SPOKEN PRODUCTION

- Has it affected the way you talk to other people?

Probes:

- Tell me more.
- Can you give me an example?

Further Probes:

- How do you feel it's made talking in general?

SOCIAL ENGAGEMENT

- How did you feel about social/ therapy groups before attending the meditation group?
- How did you feel after?

Probes:

- Did you find yourself participating more in other areas of your life?
- Did you take up any other activities?

Topic 5: TIMING

- Do you notice these changes straight after meditating - or do they last longer than that?

Probe/ Follow Up:

-How long?

Topic 6: GROUP MEDITATION

- If you did not have aphasia and communication difficulties, how would you imagine that this group experience might be different?

Probes:

- Would you still come along if you did not have aphasia?
- Why? / Tell me more about that.

Topic 7: USE OF MEDITATION

- Have you continued to meditate?

Probes:

- Tell me more about why you decided to not/continue meditating?
- Can you describe how you are using meditation?
- Can you tell me about when/ what situations you use meditation?
- Describe what effect meditation has on you when you use it in that situation.

Topic 8: ADDITIONS

- If anything about your experiences with the group could have been different, what would it be?
- Is there anything else which is important to you about mindfulness meditation or the group experience which I have forgotten to ask/which you would like to mention?

Appendix B

Interview guide for focus group (member-checking) of PWA

Focus Group Guide:

To validate findings from individual interviews on how persons with aphasia experience mindfulness meditation practices and its impact on their lives.

Feedback on Findings:

[Feedback to be presented verbally in a group room at the Curtin Adult Speech Pathology Clinic: focusing on one theme at a time. Participants will be invited to discuss each theme; if one or more participants are perceived to be dominating the discussion the questions will be re-addressed to group again after the initial discussion of the theme].

[An additional note-taker will also be present].

Announcement to Group:

"We'll be going through each theme.

We tell you what we've found from the results of the individual interviews."

QUESTIONS PER THEME:

- How do you feel about this theme?

Probe:

- Do you agree / disagree with this theme?
- Why? / Why not?

- Do you feel like it applies to the group as a whole?/ Do feel as though everyone in the group shares this theme?

Probe:

- How would you say this theme applied to the whole group?

- Have you found that it personally applied to your experience of meditation?

Probe:

- In what ways?

- Do you feel like it applies to someone else in the group (from what has been shared)?

Probe:

- Can you tell us more about this/ can you give us an example?

- Is there anything anyone would like to share or add on?