**Supplemental Material**

**Supplemental Table S1**. Search-string used in EBSCO**.**

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| **S1**: DE "STUTTERING" OR DE "SPEECH disorders" OR DE "APHASIA" OR DE "ARTICULATION disorders" OR DE "CLUTTERING (Speech pathology)" OR DE "DELAYED speech" OR DE "MUTISM" OR DE "SPEECH apraxia" OR DE "STUTTERING" OR DE "TONGUE thrust" OR DE "VELOPHARYNGEAL insufficiency" OR DE "VOICE disorders"  |
| **S2**: stutter\* OR stammer\* OR “fluency disorder\*” OR “fluency difficult\*” OR dysfluency OR dysfluent OR disfluency OR disfluent  |
| **S3**: S1 OR S2  |
| **S4**: MM "Qualitative Research"  |
| **S5**: qualitative OR “qualitative research” OR “patient experience” OR “patients’ experiences” OR “patient perception” OR “patients’ perceptions” OR “patient perspective” OR “patients’ perspectives” OR “client experience” OR “clients’ experiences” OR “client perception” OR “clients’ perceptions” OR “client perspective” OR “clients’ perspectives” OR “individual experience” OR “case study” OR “case studies” OR “case series” OR “case-series” OR “evaluation methods” OR interview\* OR “in-depth interview” OR “focus group\*” OR “oral history” OR “mixed methods” OR observation\* OR “observational method” OR “naturalistic observation” OR “participant observation” OR “ethnographic observation” OR “conversation analysis” OR “social science research” OR “consumer participation” OR transcript\* OR phenomenography OR phenomenol\* OR “phenomenological analysis” OR “phenomenological inquiry” OR “phenomenological research” OR “grounded theor\*” OR “grounded-theor\*” OR “purposive sample” OR hermeneutic\* OR heuristic\* OR semiotics OR experience\* OR “lived experience\*” OR narrative\* OR “life experience\*” OR story OR “life stor\*” OR “cluster sample” OR “action research” OR “content analysis” OR “thematic analysis” OR “narrative analysis” OR “narrative inquiry” OR “constant comparative method” OR “field stud\*” OR “field-notes” OR “audio recording” OR “video recording” OR “theoretical sample” OR “discourse analysis” OR ethnograph\* OR “ethnological research” OR ethnomethodolog\* OR meta-ethnography OR “meta ethnography” OR “open-ended survey” |
| **S6**: S4 OR S5 |
| **S7**: adult\* OR grown-up\* OR grownup\* |
| **S8**: S3 AND S6 AND S7 |

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| **Study** **Supplemental Table S2**. Example of data extraction process using one study. | **Themes/ Categories**  | **Subthemes**  | **Second-order Constructs**  | **First-order Constructs**  |
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| **Bricker-Katz et al. (2010) [41]**  | ***1) How does your speech impact on your communication currently?*** |  |  |  |
| Theme 1: Less Impact (since retirement) | Sub-theme 1.1. Acceptance/resignation | Acceptance was a sub-theme of less impact linked with the notion that they no longer experienced their stuttering as having the signiﬁcance for them that it did in the past. They seemed to judge themselves less stringently even when they did stutter.Acceptance for some was not dependent on speech improvement and was described as a shift in attitude that involved less fear of negative evaluation. | P1 responded, ‘my feeling now is I don’t care if I stutter’P12: ‘I’ve adopted a more accepting attitude, you know it’s me! And that’s how I am. Yes I don’t suppose I’m as self-conscious as I used to be — I think that comes with age’.The impact on self-esteem seems to have lessened to some degree for these participants as P9 described,‘I can handle myself I can handle it ninety nine percent of the time now’ Some participants perceived that their age made it improbable that there might be a solution to their problem with speaking, P2, ‘At this stage of our uh — my life I really don’t know. I’m uh eighty years old (laughs) I don’t think I could change much now’ |
| Sub-theme 1.2. Retirement | Statements made in relation to less impact were usually tied to no longer being in the workforce | P1 : ‘At 83, for me it’s been a continual improvement, beyond retirement’. For another participant the connection was more linear and P9 said, ‘Well now, — retired I don’t ﬁnd it an impediment at all’.P6 commented, ‘It’s still relevant for me because I’m in the workforce’ |
| Theme 2: Same Impact (same impact as when they were younger) | Sub-theme 2.1. Handicap — limitations to participation | This theme of handicap emerged from participants who felt that stuttering impacted on their lives by restricting their ability to communicate and limited their motivation and ability to participate.The group experienced restrictions to participation in activities that involved speaking in a range of contexts. The example from P5 shows restriction involving communicating in a medical emergency is of particular concern and P8 illustrated how his ability to generate new interests following retirement were also restricted because of his stuttering. | P2 stated, ‘It’s always been a handicap to me’P6, ‘My thoughts are that there is still a major impact on my life. I’ve made very great progress in managing my stutter but it still affects me’.For P5 trying to access assistance in hospital was a difﬁcult experience ‘In hospital I was having an operation and I did take a funny turn and I pressed the button and the girl came in and I just blocked up and I looked a real fool didn’t I. I just wanted to say how I felt and I couldn’t’One participant described his desire to participate in a political forum, P8:“Its like giving a point of view why you think the party should be changing and I’ve got an idea but I don’t know whether I’ll do it or not, ’cos I — I’ve got it all written out but if I go there I won’t have to get up and explain it all and think but I’m very concerned about whether I can perform properly or not”.P2 spoke about restrictions across most situations, ‘Most of my phone calls an’ talking to the outside are left to my wife to do’. |
| Sub-theme 2.2. Variability/unpredictability of stuttering and vigilance. | This cognitive awareness and the cognitive effort expended in managing their speech was described by the participants. Uncertainty about when stuttering might occur drew comments from all participants and was expressed as a strong factor that prevented them from feeling relaxed about speaking.Participants spoke about the ongoing alertness they experienced to the possibility that they might stutter. (P6) | P6 stated, ‘but it still affects me without warning’. P2 described, ‘It runs in cycles — some days no stuttering at all’. P7 added, ‘Some days are good, some days are bad’.P6 who earlier said how she never knows when she might stutter continued, ‘I’m constantly vigilant to speaking opportunities’. The comment by P1, ‘if you feel you’re going to stutter, you’ll stutter, for sure’ also illustrated how prophetic the anticipation can be |
| Theme 3: More Impact (then when they were younger) |  | P5 made a causal link between his stuttering and life stressors which were work-related. He was fearful of losing his job and spoke about being negatively judged.Increased desire to participate in group situations was a factor for P8. He described a heightened fear of being judged negatively and it is important to consider that older people may not feel sufﬁciently emotionally energized to sustain themselves in such situations. | P5 said, ‘I think in the last three years it’s got worse and that’s basically through stress in my life’.P5 ‘I tend to feel that I left a bad impression and people don’t want to do business with me, and I have heard back people become embarrassed’P8: It’s very prominent at the moment when I get into a group like this it’s very hard I block up before I start or I might block up halfway through the conversation. It’s when the time for speaking comes up’.P8 added somewhat poignantly, ‘You know I think when we do get older then our nervous system is not capable of handling the trauma that we used to’. |
| Theme 4: Coping |  | Coping was a theme with two facets, one related to coping with speech (P2), and the other was about coping with feelings that arise as a consequence of stuttering (P8 &P6). P9 spoke about tackling his fear of stuttering and trying to build conﬁdence so that he would not feel frightened of speaking.Several participants spoke about forcing themselves into speaking situations believing that facing the fear would desensitize them and therefore speaking would become easier. P2 & P9. Reﬂecting on their attempts at managing their fear, they were of the view that it was fear that made them stutter.Managing speech alone was not sufﬁcient to achieve ﬂuency. P11: | P2 said, ‘everybody develops a technique for speaking, if they stutter’ P8 reported, ‘I ﬁnd that I start off with fear and the fear becomes a habit’ P6 who gave a vivid account of how she avoided the humiliation of speaking and stuttering ‘I guess because I’m still in the workforce, and in communicating I have the choice of e-mail or whatever, but in making that choice and choosing what for me is the easy way out, that gives me a sense of humiliation that I’ve chosen to e-mail than phone. I guess self-worth’. She expressed the complexities of coping with feeling humiliated when she stuttered and feeling humiliated when she avoided stuttering by using other strategies. P9: “I kept on getting stronger and stronger and less, less caught up, I think I broke my fear down uh and I feel that in my early years, when I was so bad that it was the fear of not being able to get it out that made it ten times worse” (vocalized agreement from other participants).P2 said, ‘if you are afraid of doing something, the best thing you can do is keep doing it’ and P9 ‘I think the more you have to confront it, the better’. P11: “I think that once you get to this age, you’ve created a series of coping skills which might have been taught by various programs or you’ve initiated yourself to get you over sticky bits and so you build up your own coping skills. |
| Sub-theme 4.1. Use techniques | The theme of coping developed further as participants described how their cognitive awareness of speaking and speaking situations was managed. (P2 and P9)Older people require cognitive and physical effort to manage their speech and consideration should be given to how this is maintained in people as they grow older and face changes to their physical health.  | This was summed up by P2 when he said, ‘everybody develops a technique for speaking, if they stutter’. P9 also added, ‘everybody has attacked their problem in different ways’. Some used techniques that were learned in treatment as P6 said, ‘I use the smooth speech — it’s a tool that I’m very, very grateful to know’. Others spoke about their own techniques which helped them manage their stuttering. P9 described, ‘I would stop and take a very deep breath’. P2 demonstrated using syllabic speech which he said was helpful in very challenging situations and P10 said, ‘I’ve tried a lot of strategies, one of the strategies that I did try which I think is quite good is acting’. P2 said, ‘I’ve always relied on somebody else and when I can’t get the words out and I’m not sure, then I write it. I’ve always done that’, and P5, ‘As soon as I raise my voice I’ve got full control. If I raise my voice I can out-talk anyone’. As P2 said after he demonstrated syllabic speech, ‘but I’ve gotta keep concentrating on trying to talk like this’ and P8, ‘I’m deciding whether I write it out or whether I prepare it or have key things to say, you know I’m deciding what I’m going to do about that’. |
| Theme 5: Fear of Speaking |  | Participants spoke of fear of speaking as a component of how they felt about communicating. Fear of speaking was reported by participants irrespective of the severity of impact experienced by them and this cognition perpetuated the ongoing expending of cognitive effort. Fear was an intense emotion for the participants and was about different aspects of the stuttering experience, fear of talking, fear of being negatively evaluated and fear of the stuttering itself. | P2 described vividly that, ‘If you’ve gotta try to talk and you can’t talk, you’re scared and the fear causes your larynx to block’. P9 who self-reported recovery in his mid-40s has never forgotten his fear and described:I know personally I don’t have any doubt at all that my stuttering was much worse because of the fear. The fear of not being able to say words and talking, even talking in a one to one situation with my own family (shaking his head) I was terrible I just couldn’t get it out an’ in — I just hated public or being in public or talking in public or having to address or y’know that was just a no-no and I think it was a fear factor as well. P6 who used smooth speech successfully added, ‘Any form of verbal communication has got that fear for me. I don’t see any difference with age or aging’. |
| Sub-theme 5.1. Using the telephone. | Participants described fear of talking on the telephone as particularly onerous.Several participants expressed negative attitudes about telephone use and avoided using the telephone, by ﬁnding other ways of communicating. Since telephone use is a necessity for many work situations, social contact and keeping older people connected to services it is of concern that it remains a challenging context for older people who stutter. | P9 reacted quickly when the topic arose saying ‘Terror for me — terror ...’ and P11 said, ‘Telephones are the worst’. P6, ‘if there’s a choice I would always choose to use email or internet to communicate rather than pick up the phone. P2 stated, ‘Most of my phone calls and talking to the outside are left to my wife to do’. |
| Theme 6: Stigma |  | Statements made around this theme addressed the negative views that the participants anticipate are in the minds of others. P6 was strongly impacted by the possibility that others would think that she was mentally impaired and persisted with the idea that a shift in attitude by people who do not stutter would be of great value,Participants tried to support each other in these feelings of shame and humiliation and said things such as P8: | P6, ‘it would be good for other people to know that just because a person doesn’t speak smoothly, doesn’t mean that they’re crazy or psychological or whatever’.P6, ‘I would love people to know or to acknowledge that I’m not an imbecile’. P8, ‘it’s like ‘you look an idiot, you’re not an idiot at all times, you just look an idiot at that time’. |
| ***2) What would assist your communication?***  |  |  |  |
| Theme 7. Removing fear |  | Removing fear of speaking emerged as a solution. P2 who had experienced a range of interventions spoke about his use of anxiolytic medication and said…However, he added that this was not an enduring effect but he was ﬁrm in his belief that by reducing his anxiety he found it easier to speak. The others agreed and spoke about fear in relation to speaking and how fear was a major factor in restricting communication.  | P2: ‘It took away the fear of speaking and once that’s taken away you don’t stutter’. P9 said, ‘I don’t have any doubt at all that my stutter was much worse because of the fear’. |
| Sub-theme 7.1. Build confidence | This was expressed with conviction by P9 who believed fear exacerbated his stuttering and he linked the fear to impacting on his conﬁdence.  | P9:”oh and conﬁdence — to me I know personally I don’t have any doubt at all that my stuttering was much worse because of the fear — the fear of not being able to say words and prob’ly talking, I realized I had to have more conﬁdence in m’self.” |
| Sub-theme7.2. Self-disclosure | The idea of self-disclosing stuttering was discussed as a strategy that the participants felt had value in making it easier to communicate. P8:P2 whose stuttering was severe added with humour:Participants were all agreed that self-disclosing that they stutter created a less threatening communication context | P8:”we should let the people know that we have a problem — just tell them what’s going on. If you do let them know, you’ve got less chance of doing it, because you’re not afraid of them. I don’t think we’re going to have the problem as much as when we try to keep the secret to ourselves.”‘Well, with me when I start to speak on the phone, I don’t need to tell them I’m a stutterer’P7 found this helpful and said, ‘I actually say that to some people — forgive me but I’ve got a speech problem’, P8 added, ‘I told them that I have a speech impediment and then I got through’. |
|  | Sub-theme 7.3. Community support will help | Participants spoke about support from other people as helpful P5:Some participants felt that their communication would be assisted if other people understood more about the disorder. P1 gave a typical description of how other people respond:This interplay between fear of negative evaluation from others and the person who stutters own negative feelings about speaking frequently emerged in the themes even though the themes may have differed. | P5: ‘If the environment is fairly supportive, I’m good’. “a stutterer is really putting himself into the public. If the public see a man or woman struggling to say words, often they’ll say the words for you, thinking that they’re helping you, which they’re not, but I feel that the stutterer needs to say ‘so what?’, you know.” |
| Theme 8. Changes that come with growing older | Sub-theme 8.1. Less pressure to be fluent ‘people rather expect it of older people’. | Some discussion developed from the notion that older people might talk less. P11 expanded when she said:It could be said that passing stuttering off as another pathology feels better for some or that shame and embarrassment are reduced, a notion expressed by P11 when she said, ‘People rather expect it of older people’.There was some suggestion that as an older person one was less reactive and this tied up with the earlier sub-theme of acceptance expressed candidly by P12  | P11: this is the age where people have strokes an’ all that sort of thing, so I think if a person presented with speech difﬁculties, they just possibly assume that they had some sort of a stroke or something.P11: ‘People rather expect it of older people’.P12: ‘When I was younger I would’ve thought ‘‘Oh God How am I going to handle this’’ now I don’t even think about it’. |
| Sub-theme 8.2. Change is more difficult when older | The suggestion of continuing to work on changing speech was met with a belief that acquiring new skills was difﬁcult for an older person.Participants spoke about missed opportunity that arose because they were not effectively treated as young children. There was the imperative in their view that children who stutter be treated P12 | P2 said, for example, ‘At this stage of my life I really don’t know. I’m uh eighty years old — the older you get the more your habits become ingrained. I don’t think I could change much now’.P12, ‘Well what they’re doing now, they’re getting the kids as early as they can before they develop bad habits — coping systems — if you can teach them how to get over it without any hassles, that’s the good thing’. |
| ***3) What form would you like treatment to take?*** | NOT RELEVANT  |  |  |
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**Supplemental Table S3**. Explanation for CASP [37] judgements**.**

a Insufficient information on the recruitment process.

b Unclear whether focus group questions fully addressed the research issue. Saturation not discussed. No explanation for number of participants chosen.

c Potential bias in relation to question formation and role in interviewing not considered.

d Ethics received but issues of consent and confidentiality not addressed.

e Insufficient discussion of data analysis.

f Statement of findings not sufficiently clear. Credibility not discussed.

g Recruitment not explained sufficiently.

h Researcher role not sufficiently critiqued.

i Did not explicitly discuss relationship between researcher and participants.

j Informed consent and confidentiality for recordings not reported. Impact of multiple studies on participants not fully discussed.

k Saturation not discussed. Rationale for data collection/interview location not provided.

l Potential for bias not discussed in IPA approach.

m Did not discuss response rates or opt-out participants.

n Not clear if there were previous relationships between participants and researcher.

o Ethics, consent and confidentiality not addressed.

p Insufficient analysis of qualitative findings.

q Location not discussed.

r Insufficient information.

s Lack of consistency in presentation of themes.

t Insufficient information on enactment of planned representativeness (age, career, etc) and use of saturation.

u Research aims not clearly stated.

v Secondary analysis

w Insufficient information and no rationale provided for the selection of data presented from the 5 interviews.

x Lack of clarity about assignment of pseudonyms.

y Insufficient information on theme identification. Inconsistent use of supporting quotes for themes.

z Limited information on targeted selection of the three participants from the larger dataset.

⁓ Data not adequately themed.

\* Unclear if survey questions are appropriate for research aims.