be seen or heard by the listener. Stammering is a neurological condition with genetic underpinnings with several genes implicated. fMRI research shows that there are differences in brain structure and function during speaking tasks for people who stammer, essentially affecting how the brain processes the complex and rapid processes required for speech. Stammering typically starts in childhood, usually between the ages of two to five years old, after children have begun to talk and often around the time they undergo rapid language development. Around 8 per cent of children and 2 per cent of adults stammer (Yairi & Ambrose, 2013) which means that many children who stammer in childhood will not stammer into adulthood. It is difficult to predict which children will continue to stammer, though research has identified factors with high predictive values as being male, being an older child at onset, increased time since onset (more than a year), and having other members of the family who stammer and who continue to stammer (Singer et al., 2020).

The knowledge that stammering has a neurological predisposition explains why some children start to stammer, but it does not fully explain why some children continue to stammer, nor how they experience stammering. Parents do not cause their child to stammer, but they, along with everyone in the child's environment and wider society, have a role to play in how the child experiences stammering and therefore if and how stammering develops (Millard et al., 2008).

It is useful to consider an analogy of an onion at this stage. At the centre of the onion lies the core stammering behaviour; speech differences such as repetition of words or sounds. As the child speaks, they are simultaneously processing vast quantities of information and their system requires time to do this, perhaps a little more. However, they might rush to say what they want to say because they are excited or because they are trying to interject into a conversation and have their turn, or perhaps someone else is trying to take their turn. This increases a sense of hurry, adding more pressure to the neurological system and increasing the amount of stammering. Then, in the child's environment they may be met with impatience, inadvertent negative language about having a 'bad' stammering day, or well-meaning but unsolicited advice, such as 'take your time' which increases awareness and a sense that they are speaking in a way which they ought not. Such reactions become internalised, and the child may cultivate negative thoughts about their stammer; that they 'can't talk properly', feelings such as frustration and worry, and physical responses such as increase in tension during moments of stammering (Guttormsen et al., 2015). The layers of the onion have now started to develop and grow, and the stammering can become feared. As fear and shame grow, so too do avoidances as the person who stammers attempts to protect themselves from these difficult experiences and fit societal expectations of fluent speech.

Case Study 5.1

Bilingual Covert Stammering

Ali is an 18-year-old male who was born and grew up with his parents and siblings in Manchester. Ali is the youngest child and has two older brothers and one sister, all three of whom have already graduated from university, have moved out of the family home, are married with children, and have started professional careers. Ali was particularly close

with his sister and misses her a lot. Ali's family remain close and there are lots of family gatherings and community events where they get together. Ali and his family attend a local mosque, and he prays with his family.

Ali's parents and siblings arrived in the UK from Pakistan just before Ali was born. Mirpuri-Punjabi has always been spoken at home with his parents, who do not speak English, and is therefore L1. As Ali and his siblings became school-aged and attended school, they were exposed to English, and as their proficiency in English increased, they started to speak English together at home too, and so English is their L2. Ali's pattern of bilingualism is therefore sequential. When the siblings are with their parents and wider family, Mirpuri-Punjabi continues to be the dominant language. This shows that Ali learnt two languages in two different contexts which makes Ali a coordinate bilingual. The impact of bilingualism for Ali is additive as L2 (English) is enriching the L1 (Mirpuri-Punjabi) and both languages are working in harmony.

Ali has a stammer, which began just before his fifth birthday. His stammer started gradually; in fact, his parents had not noticed he was stammering until a relative asked what was happening with his speech, having thought that Ali was just shy until then. After a year, when Ali started to speak more in school as his English advanced, a teacher noticed his stammering and recommended his parents refer Ali to local speech and language therapy services. In accordance with the Royal College of Speech and Language Therapists guidelines, Ali was seen by a speech and language therapist alongside his parents and a bilingual co-worker for assessment, which confirmed that his language skills were strong in his home language and that he was stammering in both Mirpuri-Punjabi and English. Direct therapeutic input was provided through the implementation of the Lidcombe programme (Onslow et al., 2003), which aimed at supporting Ali's parents to maximise Ali's chances of fluency by praising fluent speech and requesting correction for stammered speech. Ali's parents were not satisfied with the lack of progress as Ali continued to stammer and he stopped attending speech and language therapy at age 9.

Ali's family did not talk with Ali about his stammering since he stopped attending speech and language therapy other than ask him to slow down, think about his words, and try to fix his stammer, and neither Ali nor his family have received any further support for stammering since. Throughout school and college, however, Ali's teachers were aware of his stammering because they made adjustments in the classroom such as not asking him to answer questions in front of the class, read aloud, or take part in class presentations. As Ali did not have any other family members who stammered and did not know any other young people who stammered, stammering felt like a taboo, especially when his parents looked pained when he did openly stammer and corrected his speech. Both in school and with his family, Ali managed his stammering though masking and trying not to stammer by word-switching and avoiding difficult or feared speaking situations such as talking to larger groups or with people he does not know. This meant that Ali gradually withdrew more and more at family gatherings as he remained quiet.

Ali is currently finishing his further education. He is academically able and is predicted to have excellent grades for his upcoming final exams. Ali has imminent interviews for a degree in accountancy and finance. However, Ali always wanted to be a lawyer like his older brother,

(Continued)

but he was fearful about the demand on his speech for the programme of study and the career so chose a course where he thinks there will be less need for talking.

During a recent one-to-one tutorial with his form tutor, Ali broke down and shared that he was worried about upcoming university interviews because he feared he would freeze and be unable to speak; beyond that, he was clear that he did not want to become an accountant and did not feel he could cope with moving away from home or meeting new people on his course. Ali said that he felt trapped and unable to live his life how he wants to and that he was feeling hopeless about his future. Ali's form tutor had been unaware of the impact Ali's stammering was having on his mental health and life experiences, having perceived Ali as being pleasant and perhaps overly studious and focused, if rather shy. Having listened to Ali and ascertained he was no immediate risk to himself, Ali agreed reluctantly to accept a referral back to speech and language therapy services.

Ali was seen by a speech and language therapist for an initial consultation within five weeks, this time without his parents present at Ali's request because he was worried about openly discussing stammering and disclosing his mental health difficulties to them. This was born from both a fear of judgement and to protect his parents from seeing how unhappy he was because he knew that his parents loved him greatly.

Societal Beliefs about Stammering

To begin to understand Ali's present situation, we must first understand his past. To do this, it is important to explore the discourse about how stammering is viewed by society and how this impacts on a person who stammers. Attention will then be drawn to potential factors that may also be influential for Ali.

Traditionally, stammering has been conceptualised by society, including mainstream speech and language therapists who typically work with people who stammer, as an impairment. Early care aims for children who stammer were curative in nature and as children who stammer grew older, if they felt discomfort or distress because of their stammering, then they should continue to work to modify their stammer to stammer less (be more fluent) or embark on psychological therapy to adopt more helpful thinking patterns to reduce their emotional distress.

Fluency-focused approaches to stammering therapy were routinely recommended and undertaken. For young children, Lidcombe Therapy (Onslow et al., 2003) was offered as an effective approach to reduce stammering (Baxter et al., 2016). Praising fluency and seeking correction for stammering is central to Lidcombe Therapy. Older children, teenagers, and adults who stammer were taught techniques that encouraged them to speak with less tension, more slowly, or with a different breathing pattern to increase their fluency (Healey & Menzies, 2008). Counting stammering and goal-setting to reduce its frequency was fundamental to fluency therapy. Such therapies appeared to be a good fit for society's understanding of stammering, including people who stammer, with the aim of 'fixing' stammering.

Likewise, therapies focusing on psychological aspects of stammering also place the burden of change on the individual who stammers who is guided to change their coping