1 Introduction to Speech and Language Therapy

1.1 What Is Speech and Language Therapy?

Speech and language therapy (SLT) is an important health discipline that is responsible for the management of children and adults with communication and swallowing disorders. The individuals who practise this discipline – speech and language therapists (SLTs) – assess, diagnose and treat these disorders as well as perform a number of other key roles. SLT is a large and growing profession. The Royal College of Speech and Language Therapists (RCSLT), the professional body for SLTs in the United Kingdom, has more than 16,000 members. Its counterpart association in the United States, the American Speech-Language-Hearing Association (ASHA), reports that at the end of 2014 it had 150,468 **speech-language pathologists** (SLPs) as certified members and non-members. In this chapter, you will be introduced to the work of this rewarding health profession. In the rest of this section, the roles that are performed by SLTs will be examined. In addition to assessment, diagnosis and treatment, these roles include education of clients and families as well as advocacy for people with communication disorders. This section will also address the many misconceptions about SLT that exist among the general public. These misconceptions can be troublesome in that they can dissuade people both from entering the profession and from availing of the services that SLT can offer.

Later sections in the chapter will expand your understanding of the professional remit of SLT. In section 1.2, the question 'Why study speech and language therapy?' is posed. The answer to this question involves several dimensions, the most important of which is that communication and swallowing disorders cause distress to, and limit the life chances of, a large number of individuals. A society that rightly values these individuals will seek to mitigate the negative effects of these disorders by providing appropriate clinical services. In section 1.3, the question 'What do SLT students need to learn?' invites examination of the knowledge base that informs SLT. This knowledge base is very large indeed and includes academic learning of linguistic and medical-scientific disciplines, on the one hand, and a range of clinical skills on the other hand. In section 1.4, the children and adults who are the primary concern of SLT are examined. These individuals have developmental and acquired communication and swallowing disorders. Some of these disorders will be examined in this section. SLT is

almost never conducted in isolation from the families and carers of people with communication disorders. The important roles that these individuals play in SLT intervention with clients will be addressed in section 1.5. Finally, in section 1.6, the growing calls for SLT to make a contribution to public health are examined.

As a window onto the work of SLT, let us consider the following scenario. Mary is a 50-year-old primary school teacher. She is married and has three teenage children. She has enjoyed good physical and mental health as an adult. Mary drives the 10 miles to her work each day. On her way to work one day, she is involved in a serious road traffic accident. She sustains a severe head injury as well as chest and abdominal injuries. Upon arrival at hospital, she undergoes a **CAT scan** which reveals a **subdural haematoma** in her brain. Emergency surgery is undertaken to relieve pressure on her brain. Her condition after surgery is monitored in the hospital's intensive care unit. When the neurologist in charge of Mary is satisfied that she is out of immediate danger, a referral is made to the hospital's speech and language therapy department. An SLT visits Mary, who has now been moved to the high-dependency unit. She is alert and appears to be oriented to time and place. However, she is completely mute and cannot make use of gestures. A bedside assessment reveals comprehension of simple four- and five-word utterances. Mary indicates her understanding of these utterances through eye movements. Longer, more complex utterances do not receive a response. Mary is receiving non-oral feeding. The SLT continues to work with Mary while she is an inpatient in the head trauma rehabilitation unit in the hospital. Mary is discharged from hospital six months after admission. After discharge, the SLT continues to work with her as an outpatient, both on a one-to-one basis and during weekly group therapy with other head trauma clients.

The above scenario does not describe an actual case. However, it serves to illustrate the types of circumstances that may cause clients to access SLT services. Among other difficulties, Mary's head injury has resulted in impairments of communication and swallowing. The information presented above is limited. Yet, it is nonetheless clear that Mary has a **language disorder**, as she is unable to understand utterances beyond a certain level of linguistic complexity. She is also unable to produce or express utterances. Her difficulties with the expression of language are compounded by the presence of a **motor speech disorder** that prevents her from producing intelligible speech sounds. As well as a language and speech disorder, Mary has a disorder of swallowing, or **dysphagia**. It is her inability to swallow safely that necessitates non-oral feeding. It is the responsibility of the SLT to assess and diagnose each of these disorders and to undertake an appropriate course of intervention. However, the SLT's duty of care towards Mary does not end there. Mary has a husband and three teenage children who are distressed by their inability to communicate effectively with her. The SLT has an important role to play in educating Mary's family members about her communication and swallowing problems. This educational role should include advice about the adjustments that they can make to facilitate communication with

Mary, including specific techniques that may make it easier for Mary to understand them.

So far, four roles of the SLT in the management of Mary's case have been identified: it is the role of the SLT to *assess*, *diagnose* and *treat* Mary's communication and swallowing disorders and to *educate* her family members about these disorders and what adjustments they can undertake in order to lessen their impact on communication. But the SLT is also performing three further roles that may not be so evident in the above scenario. The reason Mary has received SLT services during her stay as an inpatient in the hospital's head trauma rehabilitation unit is because of the SLT's role as an *advocate* of clients with communication disorders. It is through the role of advocate that the SLT has pressed the case for continued funding of SLT services against a backdrop of reduced healthcare spending. This role may bring the SLT into contact with health service managers and private medical insurers who need to be persuaded of the long-term benefits of SLT services to clients who sustain head trauma. As part of Mary's rehabilitation, she also participates in weekly group therapy with other head trauma clients. The intervention that is offered to these clients is the focus of a research study in which the SLT is the principal clinical investigator. In the role of *researcher*, the SLT aims to establish if group therapy can achieve significant improvements in the social communication skills of clients with head trauma. Finally, two junior therapists in the SLT department also participate in Mary's group therapy. It is the SLT's role to act as a *mentor* to these colleagues in order that they may acquire the clinical skills that are needed to work with this complex client group. All seven roles of the SLT are summarized in Table 1.1.

Having established the roles of the SLT, it is now necessary to consider certain misconceptions about speech and language therapy. For the most part, these misconceptions exist among members of the public. However, somewhat surprisingly, they are also often found among other medical and health professionals. The three misconceptions that will be addressed in the rest of this section are: (1) SLT is a career for women only; (2) SLTs work only with children who have speech disorders; and (3) SLT is concerned with accent improvement and elocution. Although other 'myths' about SLT do exist, these misconceptions are the most commonly encountered mistaken beliefs about the profession. They are also some of the most harmful beliefs in that they can deter individuals from considering SLT as a career or clients from seeking a range of SLT services. It is hoped that the exposure of these misconceptions will go some way towards reducing their influence or even eliminating them altogether.

The misconception that SLT is a career for women only is explicable to some extent. Notwithstanding the growing participation of both genders in a range of occupations, it remains the case today that considerably more women than men pursue a career in SLT. Data from the Office of National Statistics in the UK show that between April to June 2015, 21,000 people were employed as SLTs. Women accounted for 19,000 of these employees. By year end 2014, men comprised only 3.7% of the SLPs certified by ASHA. Speech Pathology

Table 1.1 *Roles of the speech and language therapist*

SLT role	Description	Examples
Assessment	SLTs use a range of clinical tools to assess the speech, language, voice, fluency and swallowing abilities of clients. Assessment establishes if there is a need for intervention and creates a baseline against which progress in therapy can be charted.	The SLT can use **standardized tests** to assess the language skills of children (e.g. Clinical Evaluation of Language Fundamentals; Semel et al., 2003). Some forms of assessment must use specialist equipment (e.g. the use of **videofluoroscopy** to evaluate swallowing).
Diagnosis	SLTs use the results of assessment to arrive at a diagnosis of a client's communication or swallowing disorder. Internationally recognized diagnostic systems can be used to guide diagnosis (e.g. ***Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition*** (DSM-5); American Psychiatric Association, 2013).	The SLT can use results from the Boston Diagnostic Aphasia Examination (Goodglass et al., 2001) to diagnose an adult with a specific **aphasia** syndrome following a **cerebrovascular accident** (CVA or stroke). The SLT can use criteria in DSM-5 to diagnose a child with social (pragmatic) communication disorder.
Treatment	SLTs use a range of interventions to treat communication and swallowing disorders. Most interventions aim to achieve measurable gains in speech and language skills. Where improvements in these skills are not possible (e.g. in clients with severe neurological impairment), use may be made of **augmentative and alternative communication** (AAC).	SLTs use different approaches, techniques and equipment to treat communication and swallowing disorders. Some interventions are indirect in nature and involve advice to parents and carers (e.g. environmental modifications proposed to the parents of a dysfluent child). Other interventions involve direct work with clients (e.g. phonological therapy in children with unintelligibility).
Education	SLTs undertake important educational work with clients, families, carers, other medical and health professionals and the general public. This	Clients with **voice disorders** may need to be educated about the lifestyle factors that contribute to **dysphonia**. Spouses of clients with

Table 1.1 (*cont.*)

SLT role	Description	Examples
	educational work often occurs alongside intervention or it may be a stand-alone activity (e.g. an awareness-raising campaign among the general public about communication disorders).	aphasia must receive education about this language disorder and its implications for communication. Carers and support workers of adults with **intellectual disability** require education and training in AAC (e.g. **Makaton**).
Advocacy	Owing to their communication disability, children and adults with communication disorders require others to be advocates for them. The SLT performs an important advocacy role for these clients at local, regional and national levels.	The SLT may act as an advocate for the teenager with speech, language and communication needs in the criminal justice system. The SLT can act as an advocate for clients with progressive, neurological disorders who have limited communication at the end of their lives.
Research	SLTs also contribute to the knowledge base of their discipline by undertaking clinical research. This research role can be pursued through a programme of study (e.g. masters or doctoral studies) or as part of a therapist's routine clinical practice.	The SLT's research role can take many forms including the selection of clients according to study criteria, the implementation of a particular intervention, the recording and analysis of linguistic data, and the preparation of a journal article or book for publication.
Mentoring	The SLT also has a duty to mentor less experienced therapists and to act as a mentor to SLT students who are on clinical placements.	The SLT's mentoring role might involve regular meetings to discuss progress and concerns of junior colleagues, or observation of and feedback on clinical sessions in the case of SLT students on placements.

Australia has approximately 6,000 practising members. Of this number, 98% are women and only 2% are men. The predominance of women in the profession is in stark contrast to the predominance of men in the client groups that are assessed and treated by SLTs. Significantly more boys and men than girls and women have communication disorders such as **speech sound disorders**, **specific language impairment** (SLI) and developmental **stuttering**, and males account for

the majority of individuals with conditions such as **autism spectrum disorder** (ASD) and **attention deficit hyperactivity disorder** (ADHD). If for no other reason than that SLTs are not representative of the clients they serve, efforts should be taken to correct this gender imbalance.

Central to these efforts will be a better understanding of why men are not inclined to pursue a career in SLT. A study by Litosseliti and Leadbeater (2013) gives us some insight into widely held perceptions and beliefs that may discourage men from entering the profession. One influential factor is the perceived prestige, status and salary of the profession. A careers adviser and SLT teacher in this study remarked:

> A lot of my boys to be honest, they want to be engineers or they want to earn lots of money in the city. (careers adviser)

> I think, you know, that one of the contributing factors when men look at this as a profession could be the erm . . . although it's much better, is the career progress, the career structure and the pay-scales. (SLT teacher)

Other influential factors identified by Litosseliti and Leadbeater included the perception that SLT is 'women's work'. Women are perceived to be carers and nurturers, and these are attributes associated with all the healthcare professions, including SLT. There is also a general perception that women are better communicators than men, and so women are more suited to an occupation that assesses and treats people with communication disorders:

> I think there's the perception that women are more communicative than men whether it turns out to be more realistic . . . communication and talking is always just thought of as a female thing. (female SLT)

Many of these perceptions were challenged by the careers advisers, SLT teachers and SLTs in Litosseliti and Leadbeater's study. Nevertheless, their presence is still sufficiently widespread to act as a significant disincentive to men to enter the profession. Until these perceptions can be more effectively challenged than it has been possible to achieve to date, it seems almost certain that SLT will continue to be viewed as a career for women only. This will represent a loss not only for men who would find SLT a challenging and rewarding career, but also for certain male clients with communication disorders (e.g. in the criminal justice system) who might respond more favourably to the presence of male therapists.

SPECIAL TOPIC: The SLT Workforce

SLT is widely perceived to be a 'white female' profession. This perception is borne out by the demographics of the SLT workforce. Figures from Health Workforce Australia (2014) confirm that SLT is a predominantly female profession. Between 1996 and 2011, females accounted for well over 90% of the workforce:

1996 (96.7% female)	2001 (97.1% female)
2006 (97.2% female)	2011 (97.5% female)

The workforce in the UK and USA is also predominantly female. In September 2013, the SLT workforce in England was 2.5% male and 97.5% female (Health and Social Care Information Centre, 2014). By the end of 2015, males accounted for 3.7% of speech-language pathologists who were members of the American Speech-Language-Hearing Association. This pattern is replicated in the number of males enrolled in communication sciences and disorders courses at university. In the academic year 2014–2015, some 36,498 undergraduate students were enrolled in these courses in the USA (Council of Academic Programs in Communication Sciences and Disorders & ASHA, 2016). Only 4.8% of these students were male. To the extent that most SLT training places are also occupied by women, it appears unlikely that the gender imbalance of the profession will change any time soon.

There is little ethnic diversity in SLT. Most members of the profession are white. By year-end 2015, 7.8% of ASHA members belonged to a racial minority. This compared with 27.6% of the US population, according to data from the 2010 Census. In 2011, only 11 of 5,296 speech pathologists in Australia had Aboriginal and Torres Strait Islander status (Health Workforce Australia, 2014). Reasons for the under-representation of ethnic minorities in the SLT workforce were examined by Greenwood et al. (2006). These investigators examined attitudes towards, and awareness of, SLT in 651 school and college students who were close to selecting degree courses. Among ethnic minority students, there was a lack of awareness that SLT is a degree course. These students also placed greater importance on studying for a degree, a profession and a scientific career, and were more influenced by a career's prestige and a high salary.

Age is another important demographic feature of the SLT workforce. Knowledge of the age profile of the profession is vital to workforce planning. For example, if a large proportion of the workforce is close to retirement age, it may be necessary to increase the number of SLT training places. In 2011, 6.8% of speech pathologists in Australia were aged 55 years and older (Health Workforce Australia, 2014). Currently, the age profile of speech-language pathologists in the USA is evenly distributed, as demonstrated by the following data from ASHA for year-end 2015:

34 and younger (27%)	35 to 44 (29%)	45 to 54 (21%)	55 and older (24%)

The SLT workforce in the UK is relatively young. A large proportion of SLTs who work in the National Health Service are in their early 30s. Only 1.9% of the workforce is 60 or older. This indicates either an early retirement age or older SLTs choosing to work outside the National Health Service (Centre for Workforce Intelligence, 2014).

The second misconception about SLT – that SLTs work only with children who have speech disorders – is related to the first misconception in that a perceived child-caring role acts as a disincentive to men to pursue a career in SLT. The roots of this second misconception are to a large extent historical in nature. According to Duchan (2011), most histories of speech pathology in the

USA place the origins of the profession around 1925. At the same time, Duchan remarks, a number of influential US books were published. These books included Edward Wheeler Scripture's book *Stuttering and Lisping* (Scripture, 1912), which was published again 11 years later under the title *Stuttering, Lisping, and Correction of the Speech of the Deaf* (Scripture, 1923), and a book by Margaret Gray Blanton and Smiley Blanton entitled *Speech Training for Children* (1920). The focus of both volumes is on children with speech disorders, as these comments from the preface of Scripture's text indicate: 'This book has been prepared to meet the needs of physicians and teachers; both are constantly confronted with the problem of what is to be done with a lisping or a stuttering child' (1912: vi). (Lisping is Scripture's term for an **articulation disorder**.) Its historical origins aside, the misconception that SLTs work only with children with speech disorders still persists to the present day.

In section 1.4, the diverse clients who are assessed and treated by SLTs will be examined in more detail. But in order to demonstrate just how limited a view of the work of SLT this second misconception is, it will serve us to give some thought to the different conditions that are assessed and treated even just by paediatric SLTs. Speech disorders are only one of the ways in which communication can be impaired in children. Children may have language disorders such as specific language impairment. They may have voice disorders such as **puberphonia**. **Fluency disorders** such as stuttering and **cluttering** are managed by paediatric SLTs. **Conductive hearing loss** and **sensorineural hearing loss** also come under the purview of SLT. Aside from communication disorders, paediatric SLTs also assess and treat children with swallowing disorders. In the 2014 Schools Survey conducted by the American Speech-Language-Hearing Association (2014), SLPs were asked to respond to the following question: Indicate how many students you serve in each of the following areas. Across all facility types, the mean number of students served in each intervention area is indicated in Table 1.2. Table 1.2 shows that, taken together, speech disorders account for only a minority of the clients who are served by school SLPs in the USA. There is, therefore, no basis to the claim that SLTs work only or even mainly with children who have speech disorders.

It is also not true to characterize the work of SLTs as only or even mainly undertaken with children. SLTs work with clients of all ages. This can include babies with swallowing problems, preschool children with speech sound disorder, school-age children with specific language impairment, teenagers with stuttering, young adults with motor speech disorders, older adults with aphasia and elderly people with **cognitive-communication disorders** related to **dementia**. SLTs assess and treat communication and swallowing disorders across the entire life span. Figures from the 2015 SLP Health Care Survey Summary Report (ASHA, 2015a) reveal that, if anything, speech-language pathologists in the USA spend more clinical time working with adult clients. In this survey, respondents were asked: Of the time that you spend providing clinical services, approximately what percentage is spent with the following age groups? Across

Table 1.2 *Number of students (mean) by intervention area served by speech-language pathologists in ASHA's (2014) Schools Survey*

Intervention area	Number of students
Articulation/phonological disorders	20.5
Auditory processing disorder	6.9
Autism spectrum disorders	8.5
Childhood apraxia of speech	2.9
Cognitive-communication disorders	9.9
Dysphagia (swallowing/feeding)	2.6
Fluency disorders	2.5
Hearing loss	2.9
Language disorders: pragmatics/social communication	11.0
Language disorders: semantics, morphology, syntax	22.1
Nonverbal, AAC	4.7
Reading and writing (literacy)	14.6
Selective mutism	1.3
Traumatic brain injury	1.0
Voice or resonance disorders	1.5

all facility types, the mean percentages were 16.1% for infants and toddlers, 15.8% for preschool children, 14.5% for school-age clients and 53.6% for adult clients. The idea that SLTs treat children for the most part is not supported by the findings of this ASHA survey.

The third and final misconception that we will consider is that SLT is concerned with accent improvement and elocution.[1] As with the second misconception, this view of SLT has a historical basis. Duchan (2011) describes how a number of elocutionists who practised in the early nineteenth century saw communication disorders as within their scope of interest and practice. In his book *Analysis of the Principles of Rhetorical Delivery as Applied in Reading and Speaking*, the elocutionist Ebenezer Porter remarked of **stammering** as follows:

> As directly connected with articulation, a few remarks on impediments seem to be necessary. Stammering may doubtless exist from such causes, and to such a degree as to be insurmountable; though in most cases, a complete remedy is attainable by the early use of proper means. (1831: 32)

The elocutionist movement in the UK, which began around 1750, also had an interest in communication disorders. Duchan (2011) describes how one British elocutionist, James Hunt (1833–1869), worked to cure stammering and established his own practice in speech and voice disorders. Elocution is still widely practised today. But while regulatory bodies such as the Health & Care Professions Council in the UK prevent its practitioners from claiming to offer speech and language therapy, there has been no way of preventing the perception in people's minds that SLT is practising elocution. This perception of the work of SLTs is well entrenched and still persists today. It is not unusual for SLTs to be asked to work with clients for no other reason than that they have a socially undesirable accent. The following scenario is, unfortunately, not uncommon:

> Lee Dein, a speech and language therapist from north London, refuses to treat accents. 'Six months ago, a very posh chief executive telephoned and asked me to take on one of his employees who had a Birmingham accent. It was the first and last time I dealt with accents. During the fourth session, the woman broke down. She didn't see why she should be treated as if she had a speech problem and I agreed. The more people who treat accents in this way, the more it will be considered OK to discriminate against them.'
>
> ('Oi, You! Read This', *The Guardian*, 29 September 1999)

In the UK, the Shropshire paediatric speech and language therapy service has attempted to address this misconception directly by listing 'elocution and working on accents' as one of the services it does *not* offer to clients on its website. Another manifestation of this misconception is that individuals who are interested in pursuing a career in SLT must speak with a certain accent in order to be considered suitable candidates for the profession. The following comment from an online discussion forum reflects this view:

> I am interested in learning more about speech pathology as a career, and I have a question. This may be kind of weird to ask, but do all speech pathologists need to have perfect 'standard' accents and no speech problems themselves? For instance, if someone from the US had a very strong