A brief historical introduction for non-speech and language therapists to speech and language therapy clinical areas to 2010

Introduction, development of the profession's scope

'An infinite variety of cases have to be dealt with by the speech therapists. Among those who seek help are children and adults who stammer, lisps and other childish sound substitutions, cleft palate speech, retarded or infantile speech, and also voice disorders such as hoarseness, nasality, high pitch, loss of voice, aphasias (loss of speech control), as well as surgical cases in which part of the speech mechanism has been removed or operated upon. The speech therapist has to deal also with speech disorders associated with cerebral lesions, spastic conditions, and speech disorders due to psychological causes' (Editorial, *Speech*[1] 1/4, pp. 4-5).

The description above of the clinical scope of speech therapy from 1936 will be recognisable to today's therapists, even if the terminology and definitions have changed over time in some cases. A few years later Miss Joyce Wilkins, one of the UK's founding speech therapists, spoke about the scope and aims of the profession at the College of Speech Therapists' 1948 conference. At that time, most speech therapists worked with children in school clinics as part of the School Medical Service but she also includes congenital neurological conditions (aphasia, auditory imperceptions, cerebral palsy) and acquired conditions due to head injury or diseases of the nervous system. Another clinical area she defines are 'organic cases', eg congenital malformation or acquired disease or injury to the organs of speech, such as cleft palate. Deafness and those with 'retarded development' are discussed as within the scope. She finishes with what she termed psychogenic disorders, where there was no known organic cause, eg stammering.

Tracking speech and language therapy (SLT) clinical areas over time also demonstrates the history of vocabulary associated with health conditions. Through a range of factors both internal and external to the profession, the number of client-groups mushroomed and continues to expand. A series of three short articles by Edna Butfield, Joyce Mitchell and Joan Pollitt in 1960 discuss the scope at that time (*Speech Pathology and* Therapy 3/2, pp. 84-87). In the College of Speech Therapists' 1970 evidence to the Committee of Enquiry into Speech Therapy Services (pp. 23-30), 'conditions requiring the care of a speech therapist' are outlined These include delay in the acquisition of language, leading to disorders of communication arising from impaired auditory acuity, cerebral palsy and other manifestations of brain damage, mental retardation and emotional disturbance or immaturity, lack of environmental stimulation and slow maturation in an otherwise healthy child (often a combination of factors). 'Deviations of utterance' (voice, articulation, language and fluency) are caused by for example structural abnormalities of the larynx, inability to make the required movements for speech articulation or inability to hear the sounds with which the movements are associated. Disorders of fluency included non-fluency, cluttering and stammering (stuttering). Loss or partial breakdown of voice, speech and language included aphonia or dysphonia (organic or functional), anarthria/dysarthria, aphasia/dysphasia. The 'geriatric patient' is used as an example where many disorders may co-exist. At that time areas of interest for further development of work included pre-school children, autistic children, partially hearing children, children with reading and

[1] The title of the journal of the newly-formed British Society of Speech Therapists. This organisation amalgamated with the Association of Speech Therapists to become the College of Speech Therapists, formally inaugurated in 1945. The journal was later re-titled *Speech Pathology and Therapy*, then the *British Journal of Disorders of Communication*, the *European Journal of Disorders of Communication* and the *International Journal of Language and Communication Disorders*.

writing problems associated with defective speech and language. The 1970s and 1980s saw a 'large expansion in speech therapy provision for mentally handicapped people, for those with progressive neurological conditions and for the care of the elderly' (Enderby and Davies, 1989, p. 328).

The development in SLT clinical areas forms a chapter in the 1995 history of the professional body (Robertson et al. 1995, pp. 33-47). The programme from the Royal College of Speech and Language Therapists' (RCSLT) Golden Jubilee conference that year demonstrates the range of clinical (and professional) areas of interest at that time. Twenty first century core clinical areas now include among others children with speech and/or language development difficulties, people with communication and/or swallowing problems acquired through neurological disease, autism spectrum disorders, learning disabilities, dementia, and head and neck cancer. SLT scope and roles continue to evolve, often into more technical areas such as endoscopy clinics. New clinical areas are emerging, eg swallowing problems associated with respiratory disease, young offenders. For more detailed information about the current (2020) 2main clinical areas for SLT, see https://www.rcslt.org/speech-and-language-therapy/clinical-information#section-1 (accessed 20 January 2021)

The following alphabetically-ordered sections outline the main SLT clinical areas up to 2010, with references to selected early and/or seminal texts and links to lists of the professional body's journal papers in those areas from 1935-2010. The clinical areas included are those from the *Communicating Quality 3*, RCSLT's professional standards and guidance (2006 edition).

References

Enderby, P. & Davies, P. (1989) Communication disorders: planning a service to meet the needs. *European Journal of Disorders of Communication* 24, pp. 301-331.

Robertson, S., Kersner, M. & Davis, S. (eds)(1995) *A history of the College 1945-1995.* London: RCSLT.

Linda Armstrong and Jois Stansfield, 2014 (edited January 2021)

Aphasia

Aphasia is a disorder of language arising from damage to the language areas in the brain, caused mainly by stroke, head injury and brain tumour. It can affect children and adults' ability to understand what people say, in understanding written words, in using words to make sentences, and in spelling and writing sentences and so can impact on many aspects of everyday communication. In the UK, it used to be known as dysphasia. Aphasia was one of the early client-groups for SLTs in the UK, because of medical interest in how the brain works in the late nineteenth century, better survival from stroke and head injury, and rehabilitation for WW1 and WW2 head injuries. It continues to be a SLT clinical area as the population ages and more people survive the early effects of stroke.

Early scientific descriptions tended to be single case studies, eg Broca's nineteenth century patient 'Tan'. Butfield and Zangwill (1946) published an early study of therapy effectiveness based on 70 people with aphasia, approximately half of whom were service personnel and half civilians. Now gold standard research on aphasia therapy effectiveness is considered to be randomised controlled trials: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD000425.pub4/full (accessed 20 January 2021)

Different methods of assessment arise over time from different theoretical views (medicine, psychology and linguistics) of what aphasia is and how to treat it, eg behaviourist, stimulation, neurolinguistics, localisationalist, pragmatic. By 2010, two assessment and therapy approaches dominated in the UK: cognitive neuropsychology and the social model.

Further reading

Butfield, E. & Zangwill, O.L. (1947) Re-education in aphasia: a review of 70 cases. *Journal of Neurology, Neurosurgery & Psychiatry*, 9, 75-70.

Howard, D. & Hatfield, F.M. (1987) *Aphasia therapy: historical and contemporary issues*. Hove: LEA.

Tesak, J. & Code, C. (2008) *Milestones in the history of aphasia: theories and protagonists*. Hove: Psychology Press.

See also the list of articles relating to aphasia in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Autistic spectrum disorder (2020 – autistic spectrum condition)

Autism was first identified as a condition by Leo Kanner in 1943, although physicians had described characteristics of autism from the early 1800s (eg Halsam (1809)'s observations on madness and melancholy). Almost at the same time (1944), a similar condition was described by Hans Asperger, although this was not formally given a separate diagnostic category from autism until 1994. Since 2013, the two conditions are again included under a single diagnostic heading of autism: https://www.psychiatry.org/psychiatrists/practice/dsm (accessed 20 January 2021)

Work in the 1980s by Lorna Wing and Michael Rutter described a 'triad of impairments' in autistic spectrum disorders, these being impairment of social Interaction; impairment of social communication: and impairment of social understanding and imagination. Although for many years children were not diagnosed with autism if they also had intellectual impairment, it was clear that many children did demonstrate characteristics of each difficulty and this has been explicitly

acknowledged in recent years. SLTs work with people with all of these elements of autism, in collaboration with teachers, psychologists and other professionals.

Further reading

Jordan, R. (2013) *Autism with severe learning difficulties* (2nd ed) London: Souvenir Press

Wing, L. & Gould, J. (1979) Severe Impairments of social Interaction and associated abnormalities in children: epidemiology and classification. *Journal of Autism and Developmental Disorders* 9, 11-29.

See also the list of articles relating to autistic spectrum disorder in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Cerebral palsy

Cerebral palsy (CP) is a general term for physical difficulties resulting from damage to the infant brain. The major conditions are spasticity, athetoid, ataxic or flaccid CP, although these may be mixed in presentation. CP may be associated with intellectual impairment, depending upon the site and degree of brain damage. Throughout the first half of the 20th century, because of the difficulties with formulating speech, those children with CP who were not intellectually impaired were often assumed to be so. It was only with the introduction of alternative methods of communication in the second half of the 20th century that children and adults with CP were able to communicate more effectively. Blissymbols was one such approach. Originally devised in the late 1940s as a universal written language, it was adopted for use with CP in the 1960s and was developed into a formalised approach over the next 10+ years. More recently, a range of high- and low-tech communication aids have been developed, including switches, and computer generated voice aids (VOCAs). SLTs work with children and adults with CP in association with physiotherapists and occupational therapist to ensure best positioning for communication, to support the development of spoken communication, and use of augmentative and alternative communication, plus advise on feeding and swallowing.

Further reading

Pennington, L., Miller, N. & Robson, S. (2009) Speech therapy for children with dysarthria acquired before three years of age (Protocol) The Cochrane Collaboration, Wiley: UK

Rosenbaum, P. & Rosenbloom, R. (2012) *Cerebral palsy: from diagnosis to adult life*. London: MacKeith Press.

See also the list of articles relating to cerebral palsy in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Cleft lip and palate

Cleft lip and/or palate is a condition where the roof of the mouth does not develop correctly before birth. Clefts may be on one or both sides of the mouth. Anatomical closure of cleft palates was attempted from the 19th century, although before the discovery of penicillin, any such operation was a risk to the patient. Early operations attempted to pull the two sides of the palate together, but were largely unsuccessful. Later in the 19th century, surgery took tissue from elsewhere in the body and grafted these to close the hard palate. From the 1920s surgery became more sophisticated, with muscle and bone being considered separately and a variety of flaps being created which enabled

patients to raise the soft palate and thus reduce the amount of nasality in their voice. Dentists and orthodontists have also been a core part of the team supporting clients with cleft palate.

Also from the 1920s, surgeons began to recognise the contribution SLTs could make to clients after surgery. Joan van Thal was particularly interested in the topic, first publishing in 1934, and described the speech pathology (nasal air escape, disordered articulation) and therapy (articulation drills). A decade later, Muriel Morley produced the first of several editions of her book about cleft palate, with a large number of illustrations and photographs. She outlined the surgical approaches current at the time, feeding, growth and speech difficulties, and therapy approaches, again, focusing on lip and tongue exercises, other articulation drills, 'ear training' and exercises to improve resonance. Other authors also wrote of blowing and speech exercises, with some showing photographs of materials used to support breath direction.

The approach to cleft palate following the second world war shows an increase in team working, with an array of medical practitioners (paediatricians, radiologists, surgeons), dental professionals (orthodontists, prosthodontists) nurses and allied health professionals (audiologists, SLTs) all being called upon to support clients. In recent years, surgery in particular has continued to become more and more effective with subsequent SLT intervention being required by fewer clients post operatively.

Further reading

Morley, M. (1945) *Cleft palate and speech*. Edinburgh: E&S Livingstone Ltd.

Morley, M. (1980) Cleft palate: an historical perspective. In Edwards, M. & Watson, A.C.H. (Eds) *Advances in the management of cleft palate*. Edinburgh: Churchill Livingtone.

Oldfield, M. C. (1938) *Speech training for cases of cleft palate*. London: H.K. Lewis & Co Ltd.

Van Thal, J. (1934) *Cleft palate speech*. London: George Allen & Unwin Ltd.

See also the list of articles relating to cleft lip and palate in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Deafness

The 1995 history of the RCSLT describes the arrival of deafness/hearing impairment as a clinical area for SLTs in the 1970s, yet there were journal articles available to SLTs on the subject from the 1930s and the impact of hearing impairment on speech has been recognised since the late 1700s (McGovern, 1994). This field has been characterised by political debates, including those on oral or signed communication, more recently decision-making by parents around the use of cochlear implants and terminology. 'We use "Deaf" to describe ourselves as we identify ourselves as people with a strong cultural affinity with other Deaf people whose first or preferred language is British Sign Language (BSL). We use the word "deaf" without a capital "d" to describe those who don't have BSL – an example of this is a deaf child in a hearing family that doesn't use BSL' . https://www.derbyshire.gov.uk/site-elements/documents/pdf/social-health/adult-care-and-wellbeing/disability-support/hearing-impaired/british-deaf-association-definitions-of-hearing-impairments.pdf (accessed 20 January 2021)

The 1972 Quirk Report recommended that SLTs should 'continue to seek opportunities to work with teachers of the deaf and others concerned on a co-operative basis'. It also recommended that SLTs

have a role with adults with acquired deafness. The SLT role in the UK has developed more with children than with adults with hearing impairment.

Further reading

Courtman-Davies, M. (1979) *Your deaf child's speech and language* London: The Bodley Head.

Ewing Irene (1930) Lip reading and hearing aids (2nd ed) Manchester: Manchester University Press.

McGovern, M.A. (1994) Speech and language therapy education in Edinburgh, 1764-1993. *History of Education Society Bulletin* 54 (autumn), pp. 34-43.

See also the list of articles relating to deafness in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Dementia

People with communication and/or swallowing problems associated with dementia are a relatively new client group for SLT in the UK because of rising life expectancy and so an increasing ageing population, but dementia receives early mention when 'geriatrics' began to appear in the literature. The RCSLT produced position papers on SLT for people with dementia in 1993 and 2005 (an updated position paper was published in 2014).

Further reading

Bayles, K.A. & Tomoeda, C.K. (2013) *Cognitive-communication disorders of dementia: definition, diagnosis, and treatment*. San Diego: Plural Publishing.

Kindell, J. (2002) *Feeding and swallowing disorders in dementia*. Milton Keynes: Speechmark.

Mitchell, J. (1955) The speech therapist in the geriatric unit. *Speech* 19/1, pp. 4-13.

See also the list of articles relating to dementia in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Developmental speech and language delay and disorder

Developmental speech and language delay and disorder is an overarching term for speech or language that does not follow the normal developmental pattern at the expected age. This can include difficulties in understanding or using language, or difficulties with being understood. Delayed speech and language is where a child does not achieve the expected abilities for their age, while disordered speech and language infers a difference from what is typical. Atypical language development was described as long ago as the 1930s, although SLTs worked with children whose language was delayed or disordered more regularly following WW2. Linguistics and psychology have contributed a great deal to the understanding of language difficulties and specific language impairment became better understood as a result. Duchan (2011) divides periods into the processing period (1945-65), the linguistic era (1965-75) and the pragmatics revolution (1975-2000).

Articulation and phonological disorders were not differentiated by the majority in SLT education or practitioners until the 1970s. Before that time, speech sound difficulties were referred to and treated as articulation disorders, with drills, and gradual increase from nonsense syllables, to single words, then rhymes and jingles using the relevant sounds. From the 1930s to the 1970s, large

numbers of books were produced with rhymes designed for articulation work. Increasing understanding of linguistics helped to bring about a separation of articulation and phonological approaches.

Further reading

Duchan, J. (2011) Introduction to 20th century speech pathology history. https://www.acsu.buffalo.edu/~duchan/history.html (accessed 20 January 2021)

Ewing, A. (1930) *Aphasia in children*. Oxford University Press.

Stackhouse, J. & Wells, W. (1997) *Children's speech and literacy difficulties: a psycholinguistic approach*. London: Whurr.

See also the list of articles relating to developmental speech and language delay or disorder in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Dysarthria

Dysarthria is a motor speech disorder. Respiration, phonation, resonance, articulation and prosody (intonation and rhythm) can be impaired by central and peripheral nervous system damage and so affect speech intelligibility. This can be related to medical conditions in children and adults that are stable or will improve (eg cerebral palsy, stroke) and to conditions that are progressive (eg muscular dystrophy, Parkinson's disease, motor neurone disease). It can be congenital or acquired. Increasing length of survival of people with acquired neurological disorders, such as Parkinson's disease, multiple sclerosis, motor neurone disease and Huntington's disease, has led to an increase in the number of people with dysarthria seen by SLTs. Both assessment and treatment have developed over time. The trends in SLT for people with dysarthria have been from perceptual to instrumental, exercises to technology, and increasingly sophisticated low- to high-tech alternative and augmentative communication methods.

Further reading

Butfield, E. (1961) Speech therapy and acquired dysarthria. *Speech Pathology and Therapy* 4/2, pp. 74-80.

Darley, F., Aronson, A.E. & Brown, J.R. (1975) *Motor speech disorders*. Philadelphia: W.B. Saunders Company.

Van Nuffelen, G., Middag, C., De Bodt, M., & Martens, J.-P. (2009) Speech technology-based assessment of phoneme intelligibility in dysarthria. *International Journal of Language and Communication Disorders* 44/5, pp. 716-730.

See also the list of articles relating to aphasia in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Dysfluency (stammering, stuttering)

Throughout the period, terminology around stuttering/stammering has been in dispute. At the beginning of the century 'stammering' appears to have been an overarching term for fluency and articulation difficulties and there is debate in many early texts about definition of the terms. Today,

stammering in the UK is typically the term used (stuttering in the US). The two terms are synonymous.

Before the 20th century, many elocutionists and some 'self-cured' practitioners, set up businesses aimed at 'curing' stammering and this continued throughout the 20th century. These people (almost always men) often claimed a unique and secret cure. From July 1937 until April 1939 a request for information on anyone advertising cures for stammering or speech disorders appeared in each edition of the journal 'Speech' in order to stop such people practising.

In the early part of the century (especially between the 1930s and 1950s), many hypotheses about the cause of stuttering were developed. Genetic studies have identified a genetic predisposition to stammering (Kraft and Yairi, 2012). However, the consensus remains that the condition has many factors associated with it. Therapy for stammering has always attracted disagreement and this is evident in books and journals from across the century. Stammering classes were offered by speech therapists in Manchester and Glasgow from 1906. In the first half of the century, breathing, relaxation and speech exercises were stressed by authors. In the 1950s, a range of technical advances (masking, delayed auditory feedback) influenced therapists to use specific speech techniques which modified speed, voicing, breathing and articulation in highly structured programmes. Speech technique continues to be used as an approach to supporting fluent speech. Van Riper's work throughout most of the century from the 1930s introduced a combination of psychological and speech techniques which continue to be a mainstream therapeutic approach in the UK to the present day.

Dysfluency (cluttering)

Cluttering is a speech and language disorder, characterised by speech which sounds very rapid and a client's unawareness that they have a communication disorder. It has attracted much less interest than stammering, with books on the topic appearing only occasionally. Currently, there has been an increase in interest, led especially by SLTs in the Netherlands, eg Van Hof.

Further reading

Guitar, B. (2014) *Stuttering: an integrated approach to its nature and treatment* (4th ed) Philadelphia: Wolters Kluwer/Lippincott Williams and Wilkins.

Kraft, S-J. & Yairi, E. (2012) Genetic bases of stuttering: the state of the art, 2011. *Folia Phoniatrica et Logopaedica* 64, pp. 34-47.

van Riper, C. (1973) *The treatment of stuttering*. Englewood Cliffs, New Jersey: Prentice Hall.

Ward D (2016) Stuttering and Cluttering. London: Routledge

The stuttering home page: www.mnsu.edu/comdis/kuster/stutter.html (accessed 20 January 2021)

See also the list of articles relating to dysfluency in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Dysphagia

Dysphagia is the technical term for difficulty in swallowing. The speech and swallowing mechanisms share broadly the same anatomy and physiology and so SLTs work with people with swallowing difficulty at the oral and pharyngeal stages (ie mouth and throat stages). Paediatric SLTs have been concerned with eating and swallowing problems in children with cerebral palsy in particular as well as with cleft lip and palate for many more decades than SLTs who work now with adults with neurological disorders, eg with stroke, adult acquired progressive neurological conditions. SLT intervention for swallowing difficulties for people with head and neck cancer also goes back some time.

Further reading

Fleming, S. & Weaver, A. (1979) Deglutition problems in head and neck cancer patients: implications for the speech pathologist. *British Journal of Disorders of Communication* 14/3, pp. 241-246.

Logemann, J. (1998) *Evaluation and treatment of swallowing disorders*. Austin: Pro-Ed.

Wynn-Williams, D. (1958) Congenital suprabulbar paresis. *Speech Pathology and Therapy* 1/1, pp. 18-24.

See also the list of articles relating to dysphagia in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Head and neck cancer

Cancer can affect the lips, tongue, soft palate, larynx and so impact on speech and swallowing. Medical treatments (surgery and radiotherapy) will also have adverse effects on speech and swallowing, for example also with tonsil cancer.

Marland in 1949 described in detail how to teach oesophageal voice. Use of external aids for voice after laryngectomy have become increasingly available and sophisticated, eg oral vibrator. Valving (voice prosthesis) can now preclude the need for such external aids.

Further reading

Appleton, J. & Machin, J. (1995) *Working with oral cancer.* Brackley: Winslow Press.

Edels, Y. (1983) *Laryngectomy: diagnosis to rehabilitation*. Beckenham: Croom Helm.

Marland, P. (1949) A direct method of teaching voice after total laryngectomy. *Speech* 13/2, pp. 4-13.

Tait, V. & Tait, R.V. (1959) Speech rehabilitation with the oral vibrator. *Speech Pathology and Therapy* 2/2, pp. 64-69.

See also the list of articles relating to head and neck cancer in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Intellectual impairment

Before WW2, children with intellectual impairments received very limited support from education or health services and many parents were advised to institutionalise their children rather than care for them at home. This meant generations of people with intellectual impairment received at best benign care and at worst serious abuse, away from the watching eyes of the public.

Children with severe intellectual impairments were excluded from the 1944 Education Act although 'educationally subnormal' children did become entitled to education. It was not until the early 1960s that more SLTs began to work with this client group. Junior and adult training centres were established for people with more severe intellectual impairment. SLTs increasingly worked in special schools for children who were termed 'ESN'. After the 1971/4 Education Acts made it compulsory to provide education (in special schools) for even the most severely intellectually-impaired child, therapists gradually began to offer services to these children also.

In the 1970s, key word signing approaches became a part of SLT work. The 1978 Warnock Report and successive education acts have encouraged more SLTs to become interested in working with children and adults in this client group and multidisciplinary approaches with teachers, occupational and physiotherapists, psychologists and many other professionals have increased the opportunities for these clients to communicate to their potential using speech, sign or other alternative approaches.

A campaign to move children and eventually adults out of large residential hospitals began to have results in the 1980s. Community living is now the norm.

Further reading

Jarrett, S. (2020) *Those they called idiots*. London: Reaktion Books.

Prichard, D. (1963) *Education and the handicapped 1760-1960*. London: Routledge and Kegan Paul.

Wilkins, J. [undated] (1988?) *Elsie. A person on no importance?* Published privately by the author.

See also the list of articles relating to intellectual impairment in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Mental health and forensic

Mental health difficulties in children and adults can include communication difficulties resulting from emotional, behavioural or psychiatric problems. Some authors include autism and dementia in this category, but as these each have characteristics which SLTs work with routinely, they are not included here.

In the early part of the 20th century, many people with communication difficulties were treated with psychoanalytical approaches, indicating a belief that they were the result of psychological distress. SLTs worked with war veterans with shell shock after WW1 and van Thal commented on the impact stress had on both combatants and civilians in WW2. Prisons and secure hospitals have been the focus of concern for SLTs since the 1980s. Prison staff had little training on communication difficulties, despite up to half the prison population having some communication difficulties. SLT work was predominantly the result of small numbers of individuals with a particular interest promoting the benefits of SLT intervention. This area of work has become more common as a result

of the publication of the Bercow Report in 2008, which drew attention to the high level of communication problems in young offenders

Further reading

Bercow, J. (2008) *The Bercow Report*. https://dera.ioe.ac.uk/8405/ (accessed 20 January 2021)

Bryan, K. (2000) *Speech and language abilities in young offenders*. Report to Her Majesty's Prison Inspectorate.

Crowe, T.A. (1991) Speech and hearing status of prisoners. *Bulletin*[2] 466, pp. 2-4.

Johnson, S. & Hamilton, J. (1997) The causes of crime? *Bulletin* 541, pp. 8-9.

Royal College of Speech and Language Therapists (2007) *Speaking Out: Young Offenders with Communication Difficulties.*

See also the list of articles relating to mental health in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

Voice

Dysphonia is the technical term for abnormality of pitch, volume, resonance and/or quality of the voice (aphonia is loss of the voice). Assessment and treatment of aspects of the human voice – originating from both the elocution and medicine precursors of the profession - have been core to SLT from the early days of the profession. A detailed overview of voice and SLT is provided in Robertson et al (1995).

A key theme has been increasing use of technology (eg Wechsler, 1977). The seminal text for SLTs in the UK on voice has been Margaret Greene's work which dates back to the original edition at the end of the 1950s, for which she was awarded Fellowship of the College of Speech Therapists for distinguished service (in lieu of a thesis)**.** A sixth edition is still in print (Mathieson, 2001).

Further reading

Mathieson, L. (2001) *Greene and Mathieson's The voice and its disorders* (6th edition). London: Wiley.

Wechsler, E. (1977) A laryngographic study of voice disorders. *British Journal of Disorders of Communication* 12/1, pp. 9-22.

See also the list of articles relating to voice in the RCSLT professional journal 1935-2010 and the relevant section in the annotated bibliography.

[2] *Bulletin* is the Royal College of Speech and Language Therapist's monthly magazine.