

Practitioner Review: The Assessment and Treatment of Deaf Children with Psychiatric Disorders

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The assessment and treatment of deaf children with psychiatric disorder is intimately related to the individual child's communication, which in turn is affected by a number of factors, medical, social, and cultural. The deafness can be aetiologically related to the psychiatric disorder or can be incidental. Treatment strategies should be adapted to meet the individual child and family's needs. Deaf professionals have a vital role in mental health services for this population. The use of an interpreter can clarify communication and cultural issues for deaf and hearing children, families, and professionals.

Keywords: Psychiatric disorder, assessment, hearing, language, deafness, hearing impairment.

Abbreviations: ADHD: Attention Deficit Hyperactivity Disorder; BSL: British Sign Language.

Introduction

The aim of this paper is to provide an overview of the issues surrounding the assessment and treatment of deaf children with mental health problems. Previous contributions to this series have concentrated on the assessment and treatment of a single disorder. This paper will review a range of disorders within a population of children that is itself heterogeneous, including deaf children who use spoken English and those who use British Sign Language as their main means of communication. We will illustrate our points by using case vignettes from our own work in the Deaf Child and Family team based with Pathfinder NHS Trust at Springfield Hospital in Tooting, South London, currently the only dedicated service of its type in the U.K., although services are developing in other parts of the country. We acknowledge that the clinical material used in these illustrations may reflect a bias in our referrals towards children who use sign language. The research review by Hindley (1997) and the annotation by Gregory and Hindley (1996) provide valuable background material in this area.

Terms and Terminology

When talking about deaf children we immediately encounter a difficulty in how to define and describe the

children we are talking about. This problem reflects the dilemmas and underlying beliefs of their parents, the professionals who work with them, and the adult community of deaf people. The problem of what to call your child is particularly important to parents, and other members of the family, because approximately 90% of deaf children are born to hearing parents (Schein, 1979), most of whom have no previous experience of deafness.

Four common terms come to mind: deaf, Deaf, hard of hearing, and hearing impaired. Deaf with lower-case d, deaf, is perhaps the commonest lay term for people with any kind of hearing loss. For some parents calling their child deaf provokes feelings of revulsion, whereas for others it is the most useful way to describe their child. Upper-case Deaf reflects a view of deaf people who use sign language as a distinct cultural minority, with proud traditions and strengths. Some parents feel fully at home with this notion, embracing it and finding strength in encountering a community of which they were previously unaware. Others feel a sense of threat, a feeling that their children will be taken away from them. However, deaf adults who use spoken language are unlikely to see themselves as Deaf and may define themselves as hard of hearing. Finally, many professionals, particularly doctors and teachers and some parents, use the term hearing impaired to describe children with the full range of hearing losses. Although apparently neutral, the term hearing impaired provokes powerful feelings in many Deaf adults and older Deaf children, who reject the view that they have an impairment. Freeman, Carbin, and Boese (1981) neatly encapsulate the opposing concepts:

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“Deafness can either be a difference to be accepted or a deficit to be corrected”.

There is no term that completely encapsulates each child and the community of people defined by each term has a degree of fluidity, with people moving in and out of communities and across boundaries. This paper describes work with children with permanent, bilateral hearing loss. We will refer to children who have difficulty in hearing conversational speech, aided or unaided, as deaf. We will describe children who use British Sign Language as either Deaf or deaf sign language users. Using Deaf exclusively leads to problems at the beginnings of sentences!

The Epidemiology of Deafness, Language Use, and Communication

Different children will be affected differently by the same hearing loss. However, losses in the moderate to profound range (41 dB or greater) are likely to limit children's access to conversational speech. As children's hearing loss becomes more severe (see Table 1) they are increasingly likely to use sign language, and this is particularly true amongst children with profound hearing loss (96 dB and greater). The prevalence of bilateral, sensorineural, moderate to profound deafness is 1.2/1000 and of bilateral, sensorineural, profound deafness it is 1/2703 (Davis, Wood, Healy, Webb, & Rowe, 1995).

A variety of factors relating to the child in addition to deafness per se will play a part in determining the child's use of language. These include the severity of deafness, age of onset, the presence or absence of additional disabilities, and the attitudes and beliefs of the family. However, where the child is born and brought up will also play a part. All Local Education Authorities now have formal communication policies, which should provide parents with information about the diverse communication needs of deaf children, but the beliefs of local providers of education for deaf children and local audiology services can have a powerful impact on parental choice.

Some Education Authorities will put emphasis on the early development and use of spoken language and residual hearing, seeing sign language as a threat to this and only suggesting sign when a child has failed to develop spoken language. This philosophy is often called the “Oral/Aural” approach. Other authorities emphasise the use of spoken language in conjunction with signs drawn from British Sign Language (BSL) or “Total Communication”. Finally, other authorities would encourage parents to see spoken language and BSL as separate languages, the latter promoted by encouraging contact with adult Deaf language aides who can act as language models for parents and children,

whilst encouraging spoken language development and written language—the “Bilingual” approach.

British Sign Language is the naturally occurring language of the British Deaf community, with regional variations and dialects that are akin to those of spoken languages. It is a visuospatial language that uses space, hand shapes and movements, facial expression, and bodily posture to convey meaning and syntax. Its grammatical structures are wholly different from those of English. Each national community of Deaf people has its own sign language, with its own distinct grammar. There is no true International Sign Language but sign languages share common grammatical features and Deaf people at international meetings seem to communicate across languages far more effectively than most hearing people. Members of the British Deaf community share many common cultural values. A British single cohort study has shown that when Deaf people marry, 90% of them marry other Deaf people and use BSL as their main means of communication (Kyle & Allsop, 1982). It is not possible to generalise from this single study but many deaf children will make the transition from the hearing culture of their birth families into the Deaf culture of their peers.

A longitudinal study of deaf children, studied when they were of preschool age in the early 1970s (Gregory, 1995) and followed up in early adulthood, showed that the majority of children with severe to profound deafness used some form of sign language as adults (Gregory, Bishop, & Sheldon, 1995). It is of particular interest that these children received their early education at a time when oral/aural methods of education were predominant in this country. These two studies describe in detail variations in the response of parents to realising that their child is deaf and adapting to their needs. They show that communication difficulties between deaf children and their families were common in early childhood (Gregory, 1995) and for some families persisted into adulthood (Gregory et al., 1995). Worryingly, a small but significant proportion of the young people studied (8/81) were described as having limited language skills despite having no additional disabilities. However, more recent studies show that families, when appropriately supported, can establish effective communication with their children and that sign language and spoken language can be mutually reinforcing and so support deaf children's social and emotional development. This work is summarised by Vaccari and Marschark (1997).

These studies illustrate some of the difficulties that deaf children continue to experience when communicating with their families, hearing peers, and wider society. Deaf children are vulnerable to other factors that can impede communication. A study in the late 1970s (Conrad, 1979) found that the average reading age of British deaf school leavers was 8.5 years. More recent American research has shown that the mean level of achievement in reading of deaf school leavers was 8th-grade standard (12–13 years), with 30% at or above the 10th grade and only 15% below the 3rd grade (Geers & Moog, 1989). Despite these findings, deaf children, both spoken and sign language users, often struggle with reading and writing. This may lead to confusion and misunderstanding if clinicians resort to using written notes when trying to communicate

Table 1
Severity of Deafness (Unaided)

Mild	25–40 dB
Moderate	41–70 dB
Severe	71–95 dB
Profound	96+ dB

Conversational speech is approximately 50–70 dB.

with them. Equally, many deaf children have learnt that saying yes, when they do not understand their conversational partner, is an effective means of avoiding embarrassment in social situations. This may mislead clinicians and others, including parents, into thinking that they are communicating effectively when they are not.

Epidemiology of Psychiatric Disorders in Deaf Children

The estimated prevalence of psychiatric disorder in deaf children and adolescents varied widely in early studies, from 15.4% (Rutter, Graham, & Rule, 1970) to 54% (Fundudis, Kolvin, & Garside, 1979), showing a preponderance of behaviour disorders. Hindley (1997) and Hindley and Brown (1994) explain these differences in terms of the heterogeneity of the populations studied and methodologies used, pointing out that the studies from the 1970s and 1980s used questionnaires that had not been validated in deaf populations and did not include interviews with the children. This latter point could explain the relative under-reporting of affective disorders. Hindley, Hill, McGuigan, and Kitson (1994) developed screening instruments suitable for use with deaf children and adolescents and undertook a prevalence study of a deaf and hard-of-hearing group attending a school for the deaf and a number of Hearing Impaired Units in the London area. This study estimated the overall prevalence as lying between 43% and 50.3%, with an increase prevalence in the children attending Hearing Impaired Units (57–60.9%) compared with the school for the deaf (33–42.4%), although this difference in prevalence was not statistically significant. Anxiety disorders proved the single largest single diagnostic group. Neither degree of deafness nor teacher-rated communication ability were significantly associated with psychiatric disorder, although the study did suggest that the children in the school for the deaf had a more positive self-image and better school experiences than the children in the Hearing Impaired Units.

Another recent prevalence study by Sinkkonen (1994) looked at the total population of deaf and hard-of-hearing children in Finland and found no significant difference in the rate of psychiatric disorder between this group and a hearing control group (18.7% vs. 15.8%). The high rate of signing skills in parents and consequent positive attitude towards their children's deafness may account for this low rate of psychiatric disorder. The studies described above are reviewed in detail by Hindley (1997).

Assessment

Setting and Structure of the Team

The Deaf Child and Family team consists of both Deaf and hearing professionals. The communication difficulties within a team with a changing membership can give a good insight into the problems faced by the families referred. Referrals to our team come from a number of sources, including social services, community mental health services, education, courts, audiological services,

and primary care. Close liaison with these various professional bodies is vital because the physical setting for both assessment and therapeutic work covers a wide geographical area. The team has regular consultation with four schools for the Deaf and holds a monthly clinic and consultation in a paediatric audiology outpatient department, as well as satellite clinics in areas where a service need has been identified.

Initial Interview

Initial assessments are undertaken using a multi-disciplinary approach, with more complex cases taking advantage of the different perspectives of the Deaf and hearing team members. As in many child psychiatric consultations, we ask the entire family to attend for the initial appointment, with one person interviewing the family together and then dividing them up to interview the identified patient (if any) and parents and siblings separately (where appropriate).

Communication

The choice of team member to interview the child depends on the child's method and level of communication. If the child is a native BSL user it is often useful for the interview to be carried out by a Deaf native signer, who is able to detect some of the nuances that might be missed by someone for whom BSL is an acquired language or by a hearing therapist working with an interpreter. Hindley, Hill, and Bond (1993), although cautious in the interpretation of their results, have shown, using the Child Assessment Schedule (Hodges, 1987), that the linguistic competence of the interview had a significant effect on the range of symptoms elicited at interview. For this reason a BSL interpreter is always present at our assessments, interpreting flexibly for both deaf and hearing members of the team and family. Sometimes a relay interpreter is necessary, namely someone, characteristically deaf and familiar with a particular person's idiosyncratic means of communication, who proceeds to translate it into BSL. Some of the issues involved in using an interpreter are outlined in Table 2.

Liaison with Referrers and Outside Agencies

An important principle in a service taking referrals from a wide geographical area is to ensure close liaison with local services. These services will vary in resources, but any preliminary work that they can carry out locally will be of benefit to the family concerned in terms of savings in travelling time and costs. In our own service we find that is often used to hold consultation meetings with referrers in order to clarify the aims of a referral and, if possible, to check the family's level of motivation for help. It is particularly important that the referrer is not seeking solely to use the team's increased ability to communicate with deaf children to carry out work that, with adequate communication resources, would be better done locally and in a less "medicalised" environment.

In our experience, 3 hours should be put aside for an initial assessment, leaving time for team discussion and

Table 2
Use of an Interpreter

1. Wherever possible ensure that the deaf person is aware in advance of who is interpreting (nb some interpreters will be known personally) and vice versa. It is often useful to have the same interpreter present at each session, although this is difficult in practice.
2. Give the interpreter time before the session to ascertain the deaf person's means and level of communication, set the context of the session, and allow for clarification of communication issues between all present in the room.
3. Ensure that the interpreter's professional neutrality and confidential approach is made clear.
4. Ensure adequate light for visual communication, but avoid bright light sources behind signing participants. Beards and brightly coloured clothing can be a hindrance.
5. Speak normally, but with one person at a time, and look at the person being spoken to.
6. Remember that all work using an interpreter may take longer than usual.
7. Respect the interpreter's neutrality in the proceedings, and the need for regular breaks.
8. Offer the interpreter time for a short "de-briefing" after the session, particularly if it has contained abnormally emotive material.

Table 3
Features in History Specific to Deafness

Age at diagnosis
Parental suspicions prior to diagnosis
How diagnosis was conveyed by professionals
Reaction to diagnosis
Cause of deafness
Family history of deafness
Additional impairments
Level of hearing loss
Mode and level of communication (individual and within the family)
Cultural attitudes to deafness
Network e.g. Speech therapy
Audiologist
Social worker with the school for the deaf
Deaf aids/technology
Communication method in previous interventions
Interaction and socialisation with deaf peers
Deaf role models

feedback to the family, who should be given adequate warning of this timescale. More complex assessments will include a home visit, often combined with observation of the referred child at school, and further meeting with the referrer. Table 3 lists some of the important aspects that should be elicited in the history where deafness is an issue within the family. It is particularly important to establish the family's attitude to the diagnosis of deafness, how it was conveyed by the professionals, and to what extent the deafness has been accepted by different members of the family. There are often differing views between parents about deafness and the extent to which the problems have been accepted. When grandparents are involved there can be transgenerational differences to be resolved. Sometimes there is residual guilt about the cause of the deafness, for example with congenital rubella where there might be an unspoken feeling that it could have been prevented, or there might be cultural variations, based on ethnicity and religion, surrounding the values attached to the birth of a child with an impairment. For some parents the knowledge that their child has a serious psychiatric disorder in addition to the hearing impairment can be

profoundly distressing, creating a recapitulation of the grief felt at the original diagnosis of deafness, which re-echoes at every interaction with professionals in health and education services and every life event within the family (Danek, 1988). This process has sometimes been described in terms of a bereavement (Bicknell, 1983), although Gregory (1991) and Koester and Meadow-Orlans (1990) note that deaf parents may actually welcome the arrival of a deaf child. The bereavement model can lead to parents explaining all of their child's difficulties in terms of deafness and ignoring or denying the significance of additional problems.

Susannah, a child of 13 with profound, congenital deafness and early-onset schizophrenia needed inpatient assessment and treatment. Her parents had extreme difficulty in accepting the need for psychiatric hospitalisation and angrily rejected the diagnosis and the treatment offered. They perceived all of Susannah's difficulties as the consequence of her hearing loss combined with bullying at school.

Paul, a 4-year-old boy, presented with a typical picture of childhood autism. His parents ascribed his social withdrawal and delayed language to his profound deafness. They believed that a cochlear implant combined with BSL would lead to a dramatic "unlocking" of Paul. They were profoundly distressed when this did not happen.

It seems that for these parents, accepting that their child was deaf was hard enough. Breaking the news that their child had an additional severe disorder proved unsustainable. Despite every effort to understand the family's perspective we were unable to engage them and they discharged themselves from our care. With other families we have been able to work through the desperation and engage them in effective treatment.

Mental State Examination

The linguistic structure of BSL must be borne in mind when assessing for psychiatric (particularly psychotic) illness. Kitson and Fry (1990) note that transcriptions of BSL have the appearance of thought-disordered English because of the idiosyncratic English syntax and grammatical differences. The traditional use of proverbs as a

test of abstracting ability often leads to confusion, with semantic subtleties getting lost in translation. Similarly, Jenkins and Chess (1991) make the point that language used in mental health interviews is often adapted from physical medicine, so that the question "How are you feeling?" can elicit the answer "nothing" because the interviewee feels no physical pain. They point out the need to ascertain whether the child understands the sign for emotion and its various connotations, suggesting that the interviewer gives a list of emotional signs interspersed with a concrete sign such as "car" to see if the child appreciates the difference. Along the same lines, the question "where did you learn to sign?" once brought the reply "here" from a rather bemused child pointing at the signing space in front of him. The language used, therefore, whether signed or oral, must be pitched within the child's communicative framework, as Deaf children will use phatics, such as nodding and smiling, to avoid questions that are cognitively or linguistically too complex. Deafness does not protect against auditory hallucinations, and deaf clients have been known to sign towards the source of a hallucinatory stimulus. Cultural sensitivity is required to distinguish between true perceptual abnormalities and the common belief amongst some deaf people that hearing people talk about them behind their backs. The possibility of tinnitus should not be discounted. A study by Thacker (1994) has shown evidence of formal thought disorder in the sign language of patients with schizophrenia and mania, and classified it according to traditional models using the Present State Examination (PSE; Wing, 1983).

Ethnic Minorities

Many of the children referred will come from ethnic minority backgrounds. This can lead to cultural conflicts in two ways. Firstly, Deaf teenagers may experience difficulties in reconciling the expectations of their Deaf peers with those of their families. This can be particularly so with Deaf girls from cultural groups with clearly defined male/female roles. Their peers will have an expectation that they should join them in a variety of activities, while their families will expect them to remain at home, to avoid informal contacts with boys, and in the longer-term to agree to an arranged marriage. At another level, families may experience conflict with mental health services in understanding their child's difficulties. Some families' belief systems may lead to them rejecting the diagnosis of a major mental illness, leading to difficulties in engaging the family in treatment.

Sarita was a 14-year-old deaf girl from a Bangladeshi family. She presented with a history suggestive of early-onset schizophrenia which made her ineducable in the local school for deaf children. Her father refused to accept that she might have a mental illness, seeking multiple second opinions. He refused to allow her to attend a specialist residential school for deaf children because of his Islamic beliefs. The local authority sought a care order because of non-attendance at school and Sarita was placed in a specialist residential school. She made good progress with appropriate treatment and initial difficulties

in working with her father because of marked differences of opinion were overcome through the mediation of a Bangladeshi social worker.

Additional Disability

In a predominantly psychiatry-led service one cannot ignore the different perspectives on deafness outlined earlier. However, the medical model can show the interdependence of underlying pathologies and explains the coexistence of different disorders in one individual. A wide variety of additional disabling conditions have been described in deaf children, sometimes as part of a named syndrome, the commonest being congenital rubella. These include mental retardation, pervasive developmental disorders (such as autism), cerebral palsy, epilepsy, learning disabilities (U.S. definition, see below) and visual impairment (i.e. dual sensory impairment, "deaf-blind"). The epidemiology of these conditions is affected by improvements in the prevention of viral illnesses during pregnancy (with a consequent decrease in viral causes of additional disability due to immunisation) and by the survival of premature babies at an increasingly lower gestational age (leading to an increase in additional disabilities). This state of flux informs the following statistical findings.

- (1) 30% of deaf children have an additional disability (Gentile & McCarthy, 1973; Schein, 1975).
- (2) 16% of deaf children have signs of central nervous system abnormality (Freeman, Malkin, & Hastings, 1975).
- (3) 11% of hearing-impaired adolescents had one or more educationally significant additional handicaps (Conrad, 1979).
- (4) 17% of mentally retarded children have a hearing impairment (Jitts & Keyes, 1983).
- (5) 13% of hearing-impaired schoolchildren are also mentally retarded, visually impaired, or both (Wolff & Harkins, 1986).
- (6) Additional handicap is about three times more prevalent in the hearing impaired than in the general school population (Paul & Quigley, 1990).
- (7) 22% of all deaf children have one additional disability and a further 8% have two or more (Schildroth & Hotto, 1993).

Prevalence studies of multiple handicap are notoriously difficult to carry out and interpret. Problems with definitions and inclusion criteria such as severity of additional handicap and degree of hearing impairment can lead to results that differ widely between studies. These issues are discussed in detail by Paul and Quigley (1990), who review studies with prevalence estimates ranging from 11–54%. They point out that Conrad's survey excluded children with mental retardation and visual impairments and suggest that a more realistic figure for the prevalence of multiple handicap in the hearing impaired can be reached by combining the percentages quoted above in the studies of Conrad (1979) and Wolff and Harkins (1986) to give a total of about 24%.

The presence of additional disabilities in a deaf child has important consequences for the structure of the

assessment, particularly in the area of communication with both the referrer and the referred. It is important to ascertain that information from the referrer is accurate, bearing in mind that previous assessments of, for example, cognitive ability may have used instruments not validated in a deaf population and that communication difficulties and cultural differences may have compromised the interviews. A common area of potential misunderstanding between professionals concerns the use of the terms "learning disability" and "learning difficulty". "Learning disability" as described in the American literature equates in the U.K. to specific developmental disorders of scholastic skills, e.g. specific reading retardation, or "dyslexia", whereas in the U.K. the term is used synonymously with mental retardation. However, to complicate matters further, in the U.K. the terms have come to have different meanings according to context, with social services using the terms interchangeably to mean mental retardation, while educational authorities reserve "learning difficulties" for the WHO "disorders of scholastic skills" with a different scale of severity. This confusion can be mirrored by the complex professional networks that accompany deaf children with additional disabilities, and it is important for a psychiatric team taking referrals from all these different agencies to be clear about definitions. In practice this often means taking little at face value and using valid instruments for a fresh assessment. Vernon (1982) suggests that 25% of deaf clients were wrongly assigned a diagnosis of mental retardation, the true figure being between 3 and 5%. In consequence the diagnosis of mental retardation is as often removed as made. Communication with the child with additional disabilities is the key to assessment. Few deaf children with a cognitive impairment will be fluent in BSL. Some will have a simple mode of communication with a few signs recognisable from BSL and other idiosyncratic signs developed within the family. A relay interpreter will sometimes be required.

Additional disabilities can be either acquired or genetic. The congenital rubella syndrome was, until recently, the commonest cause of deafness in the former category, manifesting visual, cardiovascular, and cerebral problems dependent upon the extent of viral infection in the first trimester of pregnancy. This has now been overtaken by Cytomegalovirus (Schildroth, 1994). The commonest forms of both acquired and genetic additional disabilities are listed in Table 4. The genetic disorders are described in detail by Gorlin, Toriello, and Cohen (1995).

Table 4
Disorders Where Hearing Impairment and Additional Disabilities Co-exist

Congenital rubella
Cytomegalovirus
Meningitis
Malformation syndromes
e.g. CHARGE association, Treacher-Collins syndrome,
DOOR syndrome
Dual sensory impairment
e.g. Usher syndrome, Norrie syndrome
Pendred's syndrome
Alport's syndrome

Although there is no evidence of an additive aetiological effect of the association of visual and hearing impairment on the development of psychiatric illness, the combination has a specific impact on a deaf child's communication mode. The commonest genetic disorder in this category is Usher syndrome, which has a prevalence amongst deaf children of about 8% (Gorlin et al., 1995). This autosomal recessive syndrome, first described by Usher (1914), is characterised by retinitis pigmentosa and sensori-neural hearing loss. There are three types with differing ages of onset and progression of hearing and visual problems. The commonest form (Type 1) is more likely to present in the deaf child population, with onset of retinitis pigmentosa in the first decade. Gait ataxia has been observed in patients with Type 1. Mental retardation and psychosis have been described in a minority of patients, although most have normal intelligence and neurological function (Das, 1989; Gorlin et al., 1995).

A knowledge of the presentation and prognosis of additional disabilities in the deaf child population is important for three main reasons. First, as in the case of Usher syndrome, because of the potential effects of the progressive visual deterioration on the child's principal means of communication, and in the case of mental retardation on the child's acquisition of fluent BSL. Second, a psychiatric team with deaf professionals and signing expertise can sometimes (probably mistakenly) be seen as "experts" in all matters pertaining to deafness and take referrals that might best be dealt with by geneticists, audiologists, and learning disability (U.K. definition) psychiatric teams with good interpreter support. Close liaison with the appropriate professionals is therefore vital. Third, again best illustrated in Usher syndrome, issues of bereavement and loss can return to a family some years after some form of acceptance of the original diagnosis of deafness. Similarly, the gradual observation of clumsiness in a child can engender anxiety in the family about a variety of serious neurological causes before the definitive diagnosis is made, with its additional ramifications for younger siblings. The onset of the visual impairment and consequent decrease in independence in adolescence can have a significant effect on a deaf teenager's self-esteem and socialisation, often leading to feelings of rejection by deaf peers. Practical issues that arise in assessment include the need for the interpreter to sit directly in line with the patient's restricted field of vision, or if this is inadequate to sign while the patient holds the interpreter's hands. A knowledge of the manual (deaf-blind) alphabet can also be useful and more than one interpreter may be required, particularly if deaf members of the therapeutic team are present. It is important that the physical layout of the clinic accommodates the needs of the client with Usher syndrome, particularly in the form of readily distinguishable doors and steps with strongly contrasting colours for ease of recognition.

Paula, a 16-year-old deaf girl with hearing parents developed anorexia nervosa within a year of the onset of the visual component of Usher syndrome. Family communication was hampered by the fact that while Paula had useful BSL, her older brother,

who also suffered from the disorder, had been brought up in the oral educational system. Family therapy sessions were used to address the anorexia but were complicated by communication issues. Her brother was intending to emigrate to the U.S.A., hoping to find a more cohesive deaf-blind community by the time he had lost all useful vision, and had therefore consciously decided not to learn BSL, so as not to confound his acquisition of American Sign Language. Two interpreters were necessary, one for Paula and one for the deaf therapist, while a hearing co-therapist transcribed the proceedings onto paper for the brother.

Deafness is sometimes described as “the invisible disability”. When it is accompanied by an additional disability with disfiguring physical features it is harder for a deaf child to find acceptance amongst deaf peers. The following case describes a boy who suffered from DOOR syndrome, a disorder where deafness and mental retardation are associated with nail and bone abnormalities (onycho/osteodystrophy).

Terry, a 13-year-old boy whose deafness and mild cognitive impairment were due to DOOR syndrome, was teased by his deaf schoolfellows about the odd appearance of his nails. While initially he coped with this in silence, as he approached adolescence he became increasingly distressed, finally taking an overdose of paracetamol. He required lengthy psychotherapy to come to terms with his perceived disability.

Unfortunately, paucity of service provision for deaf children with additional disabilities can lead to inappropriate placements.

Shirley was an 18-year-old deaf girl with a mild to moderate learning disability. She was approaching the transition from child to adult services and keen to move out of her parents' home, where she felt increasingly isolated as her brothers moved out, into a group home with other people her own age. Unfortunately, a trial in a group home with other learning-disabled adults failed because none of her peers had any form of sign language, while a subsequent placement in a signing environment broke down when she began to be scapegoated by her intellectually more able fellow residents.

Psychological Assessment of Cognitive Ability and Adaptive Behaviour

The use of psychological tests with deaf children is an area riddled with controversy. Blennerhassett (in press) discusses psychological tests that have been used with deaf children during the last 20 years, pointing out that few have been developed specifically for deaf clients and that many are out of date. She also points out the pitfalls associated with selecting out the performance-based or nonverbal sections of large-scale psychological tests, in that many of these may require verbal instructions in English. These need to be translated into BSL for a signing child whose replies must be translated back, thus leaving scope for mutual misunderstanding.

Blennerhassett describes in detail seven tests that have been validated for use with the deaf, recommending as tests of cognitive ability the Hiskey Nebraska Test of Learning Aptitude (Hiskey, 1966) and the English translation of the Snijders-Oomen Nonverbal Intelligence Scale (Snijders & Snijders-Oomen, 1970).

The performance scale of the WISC-R (Wechsler, 1974) has been standardised for use with the deaf as part of a project supplementary to the original development of the instrument, as has its revision the WISC-111 (Wechsler, 1991). The relationship between the two is discussed by Slate and Fawcett (1995). The Vineland Adaptive Behavior Scales (Sparrow & Cichetti, 1985) have been similarly validated.

Of tests without norms for deaf children, the use of the Arthur Adaptation of the Leiter International Performance Scale (Arthur, 1952) remains controversial because of inadequate validity and reliability. It is most useful in children between the ages of 5 and 9 and has the advantages of a minimum of timed items and the capacity for the instructions to be mimed (Morgan & Vernon, 1994).

Because of the problems surrounding normative data in the deaf population, it is often wise to perform more than one test and look for correlation of results (Bond, 1986).

Assessment of Specific Diagnostic Categories

Pervasive Developmental Disorders

Although there have been attempts to study the epidemiology of hearing impairment and autism and the common underlying aetiology, little specific attention has been paid to assessment and intervention. Juré, Rapin, and Tuchman (1991) identified 46 (4%) of a clinic population of 1150 hearing-impaired children as meeting the DSM-III-R criteria for autism, and showed how hearing impairment can confound and delay the diagnosis of autism to a median age of 49 months. Consequently, late identification of a suitable school placement can lead to educational disaster. They conclude that this placement should include an emphasis on visual communication and a behavioural management programme.

Brimer and Murphy (1988) describe the case study of a deaf teenager with autism and the behavioural methods used to modify his classroom tantrums. They list recommendations for the educational environment of autistic hearing-impaired individuals, emphasising issues of consistency of staffing and communication methods. Interestingly, they suggest that the removal of voice and lip patterns while signing can lead to improvement in attention and eye contact.

Tim was a 5-year-old boy referred by his school for deaf children because of concerns about his social relationships. He had a history of gaze avoidance, failure to interact with other students, delayed echolalia in sign, and stereotypical hand movements. He was markedly impulsive at home and in school, where his behaviour could not be contained. Tim transferred to a specialist residential school for the deaf with staff experienced in working with children with autism and deafness. Over a period of 6 months

there was a noticeable improvement in Tim's sign language with a related improvement in his social interaction. The severity of Tim's autism appeared to diminish as a result of placement in a more appropriate environment. The team's clinical nurse specialist worked with the family to improve communication and as a result there was an improvement in Tim's behaviour.

Attention Deficit Hyperactivity Disorder

An overview of theoretical and epidemiological aspects of disorders of overactivity and attention deficit in Deaf children is provided by Hindley and Kroll (1998). The prevalence of Attention Deficit Hyperactivity Disorder (ADHD) in children with hereditary deafness is no greater than that of their hearing peers, but acquired deafness is associated with an increased risk due to common pathology, most frequently congenital rubella, cytomegalovirus, and meningitis (Kelly, Forney, Parker-Fisher, & Jones, 1993; Kelly, Kelly, et al., 1993).

The diagnosis of ADHD is often confounded by factors such as a perceived increase in impulsivity in deaf children (Harris, 1978; O'Brien, 1987), particularly in children with deafness due to congenital rubella with additional impairments (Chess & Fernandez, 1980). The deaf child's reliance on visual cues in the classroom as well as at play can add to these diagnostic difficulties. Kelly, Forney, et al. (1993) suggest that deaf children may re-channel energy into physical activity and that in adolescence there is an increase in hyperactivity, possibly due to problems adjusting to school transitions, in contrast to the more frequently observed decrease in hearing adolescents. This can lead to overdiagnosis of ADHD in the deaf population, as can a failure to take into account epileptic phenomena, observable drug side effects, and inappropriate school placements. Furthermore, many behaviours that are the norm for deaf children, such as looking around the room for communication purposes, might be considered symptoms of ADHD in hearing children (Morgan & Vernon, 1994). These authors also give an account of the most useful rating scales for identifying and monitoring ADHD, cautioning against too concrete an interpretation of the results of tests where there are no data on their use with a deaf population, such as the Conners' Questionnaire (Conners, 1969). The Behavior Problem Checklist (Quay, 1977) is recommended because normative information exists on its use with deaf children.

Kelly, Forney, et al. (1993) outline a treatment protocol involving close liaison between school, family, and psychiatric services that differs little from the traditional management of hearing children with ADHD, with behaviour management, environmental modification, and family work as interventions of choice and stimulant medication as a supplement if necessary. The need for social skills training with deaf children is emphasised on account of their vulnerability to social isolation. The authors also recommend the minimum of visual distraction for the children.

Tom was a 6-year-old deaf boy referred by his school. His mother described him as overactive, frequently running off at home and at times showing

marked temper tantrums. Class observation revealed restlessness and distractibility. His teacher complained that "he always seems to do things without thinking about them first". Tom could be markedly disinhibited with his peers, which led to them shunning him and Tom complaining that he had no friends. Tom appeared to meet the criteria for hyperkinetic disorder and made a good response to methylphenidate.

Conduct Disorder

Many children presenting with marked conduct disorders within our service have similar histories of communication difficulties within their families, which have significantly affected the child's social and emotional development. For some deaf children, failure to establish early language can lead to considerable difficulties in the development of empathy and of social problem-solving skills (Greenberg & Kusché, 1988). In addition, the fact that their child is deaf can lead to marked differences in the treatment a child receives within the family, further compounding their emotional and behavioural difficulties. Early intervention using behavioural strategies that can accommodate the need of both the child and the family for alternative methods of communication while helping to contain the parents' feelings of distress can prevent the later development of conduct disorder.

Roger was an 11-year-old deaf boy referred because of significant behavioural difficulties at school. He was physically aggressive towards his peers and towards staff, lied, and had stolen money from his parents on several occasions. Roger's parents had been strongly advised to promote the development of Roger's spoken language and encouraged not to use sign language. At the age of 6 Roger only had five meaningful words and marked behavioural problems. Both parents had limited communication with Roger and had major differences of opinion in how they felt Roger should be treated. His mother excused all his behaviour because he was deaf, while his father denied that Roger showed any difficulties, blaming all his problems on his wife. Roger had little understanding of the effect of his actions on other children and no empathy for the distress caused in the victims of his attacks. The main thrust of the intervention centred around encouraging the development of more consistent strategies and in improving the quality of the communication.

Emotional Disorders

Despite epidemiological findings suggesting an increased prevalence of anxiety disorders amongst deaf children, in practice we see very few cases. It may be that this is because of lack of recognition of emotional symptoms by hearing professionals at the primary care level. The following vignettes illustrate some of the issues that arise.

Anxiety disorder.

Teresa was a 10-year-old girl referred because of severe anxiety symptoms in group situations. Her hearing parents had denied the implications of her deafness and entered her into a mainstream school, where she was struggling to keep up using oral methods of communication. It was evident that she could only understand a fraction of her peers' conversation and they in turn soon gave up explaining the rules of games that were new to Teresa. Although we were told she had no signing skills, she was evidently fascinated by the presence of a BSL interpreter and began to sign her name and other simple words. Conversely, her parents admitted their discomfort with exaggerated lip patterns and manual communication. Teresa became notably less anxious when talking about her deaf friend who had taught her the BSL alphabet, and was positively relaxed after meeting a deaf member of the team.

Post-traumatic stress disorder.

Ali was a 15-year-old profoundly deaf boy whose family had been caught up in civil war in the Horn of Africa. He had witnessed the death of his stepmother and other members of his extended family and had spent 6 months wandering through the bush before arriving in a refugee camp. When he entered school in this country he had no formal sign language but had developed a system of signing at home. Although he made rapid educational progress, he presented repeated re-enactments of scenes of violence and of death associated with marked aggression towards his peers, particularly the female students. Ali was excluded from his school but continued to have home tuition and engaged in individual therapy with a Deaf psychodynamic counsellor. Ali was able to slowly recount his multiple traumatic experiences and he was helped to process the powerful feelings these generated in him. Over a period of 18 months one further serious assault occurred, but this was not repeated. Ali was referred on to a residential treatment centre for deaf young people and has made excellent progress since then. His highly idiosyncratic sign language and marked educational delay posed a major therapeutic challenge. His Deaf therapist's ability to engage him and hold him in treatment underlines the role that Deaf professionals can play in mental health work with Deaf children.

Affective disorder.

Meena was a 12-year-old girl who had become progressively deaf during her childhood. Although she had initially been able to develop spoken language, she had transferred to a signing school because of the worsening of her hearing impairment. Meena had initially been seriously distressed by her hearing loss, but had established good relationships with her peers in the school and had rapidly developed useful sign language. At puberty she

began to complain of being unable to complete homework tasks and repeatedly told friends that she wanted to die. Psychiatric assessment revealed a major depression associated with family tensions around Meena's desire to socialise with her deaf peers. Antidepressant medication in conjunction with psychotherapy led to a progressive improvement in the depressive symptoms, but it was impossible to resolve the intrafamilial difficulties. Meena chose to identify more closely with her family's values and avoided contact with her deaf peers outside school hours, although she remained popular at school.

Tony was a 15-year-old deafened boy referred with symptoms suggestive of a depressive illness by his residential special school for children with a variety of special educational needs. His symptoms coincided with the recent death of two schoolfriends with muscular dystrophy. He was in a minority as a hearing-impaired pupil and would have nothing to do with deaf children who "wave their hands about". He communicated through lip reading and the use of powerful hearing aids and was suspicious of a service which he perceived as providing specialised help for children who use sign language. With the help of a hearing member of the team it was possible to explore these issues without exposure to BSL and a link was made with a hearing bereavement counselling service.

Eating Disorders

Little has been written in the literature about the relationship between deafness and eating disorders, although various authors have concluded that poor communication within families can lead to disorders of body image, while Silverstien (1988, cited in Fletcher, 1993) suggests that restrictive, overprotective environments may predispose towards dieting behaviours. De Leo and Santonastaso (1987) suggest that deafness can lead to communication problems, which in turn may act as a predisposing factor for the development of anorexia nervosa, citing previous authors' confirmation of the importance of communicative exchanges in both infancy and adolescence in the aetiology of the disorder. They also review the psychoanalytic literature on the relationship between language and eating and describe the case of a prelingually deaf adolescent with anorexia. Touyz, O'Sullivan, and Beumont (1994) describe in more detail a case where the communication problems between a 15-year-old prelingually deaf girl and the therapeutic team are compounded by the girl's lack of proficiency in her native (Australian) sign language and spoken English, despite average intelligence. Her deafness also made it difficult for her to benefit from the group-based focus of the unit.

There is no published evidence of an increased prevalence of eating disorders in deaf children and adolescents. One might speculate that deaf adolescents' decreased exposure to the radio and television culture of their hearing peers could act as a protective factor, leading to a comparative decrease in prevalence. Equally, one might

think that a concentration on the visual might be a risk factor. Our own team's experience shows no anecdotal evidence for either view. The issues are discussed by Hills, Rappold, and Rendon (1991) in the context of other cultural minority populations, concluding that despite limited access to auditory media, the cultural messages are no less compelling for the deaf. Rendon, Hills, and Rappold (1992) describe further the implications for the deaf community of the generally increasing prevalence of eating disorders, stressing the need for education of deaf counsellors, while Fletcher (1993) describes a pilot study of the eating and dieting behaviour in a college-age American hearing-impaired population with a hearing control group, concluding that there are no differences between the two.

In our own service we see the benefits to be gained from detailed mental state examination in sign language in order to clarify the diagnosis from amongst the various possible differentials and particularly to exclude psychotic illness.

Christine, a 16-year-old profoundly deaf girl who used BSL as her principal means of communication, was referred with marked rapid weight loss. She described voices telling her not to eat. Further assessment showed these to be intrusive thoughts rather than auditory hallucinations. It took skilled signing proficiency to distinguish between these subtleties of psychopathology. When the diagnosis of anorexia nervosa had been confirmed it became important to work closely with specialist services (including an inpatient unit) bearing in mind her likely need for ongoing support from adult services. The treatment plan involved regular sessions with a hearing eating disorders nurse specialist working through an interpreter, as well as supportive psychotherapy with a signing therapist. The family were offered family therapy but did not take up the offer as they saw their daughter gaining weight.

Sexual Abuse

Estimates of the prevalence of sexual abuse in a hearing-impaired population range from 11% to 50% (Sullivan, Vernon, & Scanlon, 1987), with the majority of authors quoting figures at the higher end of the range. The prevalence rates in the hearing population are significantly lower (Finkelhor, 1984). Brookhouser, Sullivan, Scanlon, & Gabarino (1986) quote studies revealing a 30–70% incidence of preexisting handicaps and developmental disabilities amongst abused children and outline some of the reasons why deaf children are particularly vulnerable, including increased parental stress, the culturally defined devaluation and stigma surrounding impairment, and the deaf child's lack of access to traditional means of communication of distress. The wide range of prevalence estimates and the uncertainty about their accuracy can be explained by the confounding effects of communication difficulties on the identification, investigation, and treatment of abuse. Indeed, Kennedy (1989) suggests that the consequences of deafness often mirror those associated with abuse. She also advocates (Kennedy, 1992a) specialist training for

child protection workers in the use of interpreters and the increased use of people skilled in signing and augmentative communication in assessment, therapy, and court proceedings. She discusses the need for adequate time for the assessment and sensitivity to the linguistic needs of some deaf children who may have difficulties grasping abstract concepts. Some of the communication problems are illustrated in a vignette (Kennedy, 1992b) describing an 8-year-old profoundly deaf child educated in the oral/aural tradition and consequently lacking signing skills. She relied on lip-reading, with its strong reliance on context, and had a teacher present as interpreter, which is inappropriate but often occurs because of the paucity of suitably qualified and readily available interpreters (and lip-speakers, the use of whom would have been more appropriate in the case cited). She further notes that children with signing skills tend to fare better than their more oral peers in police and court environments as they are more likely to be treated as reliable witnesses.

Reviewing treatment methods, Sullivan (1993) reiterates the need for appropriate language support in therapy and a knowledge of language developmental issues. She discusses the hearing-impaired child in the wider context of language delay and suggests the use of the "feelings box" technique, whereby children who have an impoverished affective vocabulary are encouraged to express and label emotions in themselves and others, quantifying them by the use of the "feelings line". A study of the effects of psychotherapy on the behavioural problems of children who had been sexually abused has been performed by Sullivan, Scanlan, Brookhouser, Schulte, and Knutson (1992). They used the Child Behaviour Checklist (Achenbach & Edelbrock, 1983) before and after a course of 36 2-hour weekly sessions conducted by mental health trained therapists fluent in sign language. The results show a significant decrease in ratings after treatment in comparison with a control group. The details of the psychotherapy, which was educative, therapeutic, and preventive, are described by Sullivan and Scanlan (1990) and the study is critically evaluated by Hindley (1997).

Emma was a 14-year-old profoundly deaf girl attending a residential school, who was referred because of marked behaviour disturbance at school associated with a preoccupation with sexual matters. At assessment she disclosed that her father had sexually abused her over a period of 3 years, only stopping at his death. Her mother had great difficulty accepting the disclosure, as did members of staff at her school. Emma attended school at a considerable distance from the Deaf Services and it was arranged for a local service to provide psychodynamic counselling. Emma was able to engage her therapist through a sign language interpreter, but her school had great difficulty in containing the anxiety generated after the sessions in Emma and, as a result, within the school. After a period of 3 months the school insisted the therapy be stopped and with great reluctance the therapist and our team agreed. These difficulties illustrate the difficulties of trying to serve children who live at a considerable distance from the team and in educational establishments that may not

be attuned to mental health approaches to working with children.

Treatment

The assessment and treatment of specific diagnostic categories has now been described; the next section will concentrate on the more general issues of treatment setting and modality.

Treatment Setting

As with traditional models of child psychiatric practice, the vast majority of children will be seen and treated as outpatients. However, in a specialist service there is a greater need for flexibility, so school consultation, audiology liaison, domiciliary visits, and "satellite" clinics are useful means of providing a service to a wider population. Occasionally, there is a need for inpatient treatment. A number of authors have described inpatient units for deaf children (Burnes, Seabolt, & Vreeland, 1992; Edelstein, 1978). These can form part of a residential educational establishment (e.g. Sarlin & Altshuler, 1968; Sarti, 1993). The advantages to be gained from residential settings include a strong Deaf presence (including staff and "role models"), culturally affirmative programmes, a therapeutic community ethos; and family liaison in a safe environment (particularly if child protection is a concern). There is also great potential for seamless integration of mental health and educational activities. Such resources are scarce, however, and geographically disparate. The temptation is to find a local "hearing" unit and to rely on interpreter support. This can be problematical and counterproductive, well illustrated in a case study by McCune (1988), who describes the scapegoating that can arise from communication difficulties between a deaf adolescent and hearing staff members whose initial rescue fantasies and enthusiasm for learning sign language soon change to despair, with adverse consequences for both the individual and his hearing fellow patients.

Treatment Modalities

Psychotherapies

All forms of therapeutic modalities can be adapted for use with the deaf child. These include psychodynamic, cognitive-behavioural, and family therapies. The main areas of difference are in modes of communication and in an emphasis on the visual and the nonverbal.

Hoyt, Siegelman, and Schlesinger (1981) describe some of the general difficulties for hearing psychodynamic psychotherapists working with the deaf, which include a "loss of articulateness", frustration with the slow speed of the work, the need for strong emphasis on the use of facial expression (which can be tiring), and the importance of a constant awareness of language and communication issues. They also suggest that some deaf clients can exercise a form of coercive dependency that leads to counterproductive rescue fantasies springing from guilt on the part of hearing therapists. The presence of an interpreter becomes particularly intrusive in in-

dividual psychotherapy, with a detrimental effect on the transference relationship. Problems can arise when differences between client and therapist (i.e. deaf/hearing) dominate the material, although these differences can also be used to therapeutic advantage (Urban, 1990). Methods of working need to be adapted to the communicative ability of the child and therapist. There is a large overlap in this area with art therapy and its use of the visual (Cohene & Cohene, 1989; Henley, 1987), which is of particular benefit in the treatment of sexual abuse. Kennedy (1994) discusses the relationship between art and the iconic aspects of sign language, although it is important to bear in mind that deaf children exploit the phonemic aspects of sign language, rather than the iconic, for comprehension. Correspondence therapy (Burnell & Motelet, 1973) has also been used to overcome difficulties in verbal communication, although this has its limitations with children who have difficulty with written English.

The issue of the relative merits of hearing and deaf therapists has become politicised, but in many places is determined by local resources. In our own team, the use of a qualified deaf counsellor can be doubly advantageous, as the counsellor can act as a deaf adult role model. It is part of deaf mythology that many deaf children believe that they will become hearing when they grow up. The use of deaf professionals can counter this while showing deaf adults in a positive therapeutic role. The shared experiences and deaf therapists's first-hand knowledge of deaf culture is also of incalculable benefit, but no substitute for a thorough psychodynamic training. A Deaf perspective on this subject is offered by Corker (1994).

Group psychotherapy with deaf children is often integrated into an educational environment. The common experience of deafness can give a cohesion to the group, although differences in levels of deafness and in communication mode and ability can cause tensions. These can be attenuated by having deaf and hearing co-therapists. Further shared experiences, for example refuge status, can be a useful focus. Group psychotherapy initiatives with deaf adolescents are described by Sarlin and Altshuler (1968) and Feinstein and Lytle (1987). Cognitive and behavioural interventions are effective with deaf children, particularly if homework tasks and charts are presented visually, with creative use of colours, cartoons, wall diaries, video, etc. It is important to adapt more traditional behavioural techniques to the needs of the deaf child, for example the substitution of a "flashing light" enuresis alarm for the customary auditory signal. However, these adaptations can embrace family communication as well as technology. In our own team we have adapted the Parent/Child Game (Forehand & McMahon, 1981) to augment communication and boundary setting between hearing parents and deaf children.

Family Therapy

In family therapy, which can be in either an inpatient or an outpatient setting, the ramifications of deafness for both deaf and hearing members of a family can be explored in depth. Although family "work" is an integral

part of any child's treatment, more formal family therapy gives scope for greater involvement of a wider range of family and multidisciplinary team members. A comprehensive account of a team that specialises in Family Therapy with the Deaf has been written by Warner (in press), and includes a detailed review of the literature. The team itself consists of both Deaf and hearing therapists and uses the Reflecting Team model originally described by Andersen (1987) and more recently reviewed by Perlesz, Young, Paterson, and Bridge (1994). This entails the use of a one-way mirror and the opportunity for the family to swap places with the team to observe their reflections.

The level of signing skills in the hearing members of the team varies widely and two Sign Language Interpreters are used creatively, depending on the communication needs of the family, team, and therapist. One signs for the Deaf family members and team members behind the screen, while "voicing over" for hearing members, while the other interprets the reflections. The presence of Deaf team members has a powerful effect on Deaf clients and has parallels with Family Therapy with other minority populations based on ethnicity or disability, as described by Boyd-Franklin (1989), where the sharing of common experiences is seen as a valuable method of "joining" with the family, and by Byng-Hall (1995), who discusses the use of his own disability in his work with families with a disabled member.

These examples impinge on the much wider issues of the therapist's use of self and family of origin as well as the careful use of self-revealing material in the reflecting team (Lieberman, 1987). Paradoxically, this appears to go against the traditional Milan Systemic ideas of neutrality and there are wider dangers regarding the blurring of therapeutic boundaries and over-identification with the family. In therapy with the Deaf, however, these can be very effective manoeuvres.

These issues are discussed by De Zulueta (1990) in a paper which looks at the potential for creative use of language with a bilingual family (or indeed a bilingual therapist or team member). She describes the pitfalls of working in a second language without a native speaker to check on linguistic nuances and cultural differences and shows how the use of one language rather than another can lead to unequal alliances between the therapist and family members and to denial of linguistic and cultural differences. Sometimes the very presence of an interpreter serves as a reminder of differences within families where the implications of deafness have previously been denied (Sloman & Springer, 1987; Sloman, Springer, & Vachon, 1993).

This role of the interpreter is one of a number of interesting issues in family therapy with the deaf discussed by Harvey (1982, 1984, 1989). Difficulties can arise when the client is known personally to the interpreter (some of whom are bilingual children of Deaf parents) or where sensitive issues in a hearing child of Deaf parents have reopened long-closed wounds in an interpreter who is not routinely offered supervision or the opportunity to comment on the material which emerges in the therapy. Similarly, the therapist's knowledge of an interpreter's background can colour the proceedings, (i.e. whether they are bilingual from a Deaf family or whether they

have studied BSL as a second language). This can have a subtle effect on the therapy, particularly when the identified patient within a family is hearing. Some hearing children describe relief when they find an interpreter present at family sessions, realising that they are being spared their usual unwanted interpreting duties.

Diana, a hearing adolescent anorectic daughter of Deaf parents referred for therapy, had for years acted as interpreter for her parents in the hearing world, with a consequent blurring of the boundaries around the parental subsystem. The team's reflections speculated that this "burden" might correspond to the weight she was trying to lose.

Josh, a 15-year-old hearing boy, was referred because of school truancy. He described his frustration at having to go on age-inappropriate family outings in order to listen out for tannoy announcements for his Deaf mother and stepfather and 4-year-old half-brother. The family had never acknowledged this skewing of the family hierarchy.

When it is the child who is deaf the opposite situation can arise, and hearing parents can overprotect the child and delay the attainment of independence. This often occurs when the parents fear that they will lose their child to a culture that is alien to them and into which they cannot penetrate.

Charlotte, an 11-year-old deaf girl, was being seen with her parents by the family therapy team. She had had a late diagnosis of deafness and her parents were still pursuing medico-legal avenues for compensation, believing that the deafness had been caused by ototoxic antibiotics given unnecessarily in infancy. They discouraged their daughter's attempts to use sign language, putting it down to her wish to be seen as different, and sought to educate her in a mainstream school with no deaf peers. It emerged from the genogram that Charlotte's paternal grandfather had become deafened in middle age and had died soon after the diagnosis of her own deafness. The family reacted with horror at the team's suggestion of adventure holidays with other deaf children, not believing that deafness was compatible with activities such as sailing and rock climbing.

There are features of the reflecting team that work very well in a team of mixed Deaf and hearing therapists. The composition of the team often reflects that of the family in terms of culture (Deaf/hearing, signing/non-signing) as well as gender, and the absence of an interpreter behind the screen often leads to more "spontaneous" reflections rather than the "unintentionally pre-planned collective message" that often emerges after discussion amongst team members, thus keeping the therapy at first-order level (Golann, 1988). The need to talk through an interpreter during the reflections also concentrates the speaker on speaking concisely. Hesitancy and speculativeness in the reflections, as espoused by Andersen (1987), works well for hearing family members, but for deaf members the benefits can be lost during interpretation, particularly as many BSL users are not experienced in the speculative thinking encouraged by circular questioning. It is important to ensure that both

deaf and hearing family members have equal access to the reflections, and a flexible approach should be adopted, tailored to each family's needs, with constant review by team members, particularly the interpreter. When the deaf child has little or no sign language, the interpreter can be of little assistance short of lip-speaking, and for Charlotte (above), for example, following the reflections from behind a screen would be impossible. On this occasion the team came into the room and reflected in close proximity to Charlotte who could lip-read, albeit with difficulty. Much play can be made of seating arrangements and emphasis on communication needs in these situations, serving to reinforce issues hitherto denied. Experimentation is valuable with individual families with regard to the most effective way of linking the team and the therapist. On occasion it is more appropriate for a team "spokesperson" to come into the room to convey the views of the team members behind the screen, or to engage the therapist in a dialogue about the issues raised during the session. Similarly the language used and modality (e.g. sign or voice plus sign interpretation) in the reflections should be tailored to the family's communication needs.

Pharmacotherapy

There are no drug treatments specific to a hearing-impaired population, but there are a number of issues that arise when medication is recommended. These include the communication difficulties faced by a child experiencing visual and extrapyramidal side effects and relying on manual means to describe them. Jenkins and Chess (1991) report a deaf patient experiencing blurred vision who had stopped taking medication for fear of going blind in addition to his deafness and of thus being deprived of his primary (visual) means of communication. It must be remembered that pigmentary retinopathy is a rare side effect of thioridazine at high doses, and in our own experience we have seen visual side effects with pimozone.

Sometimes parents' views are coloured by their memories of the cause of their child's deafness, particularly when this is ascribed to ototoxic medication or exposure to high oxygen concentrations in infancy. This can lead to an understandable reluctance to consent to drug treatments where side effects are common. Unfortunately, the newer antipsychotics, which with their improved side effect profiles would logically be of benefit to deaf children, are sometimes unacceptable to these parents because of the drugs' novelty and the parents' memories of false reassurance in the past.

Early Intervention

Early intervention programmes that provide children with exposure to teaching methods which incorporate both oral and visual methods of communication have been shown to be most beneficial to hearing-impaired children in a number of areas. Greenberg, Calderon, and Kusché (1984) have studied social as well as academic (cognitive) outcome measures (including parental stress levels) in 12 children and families involved in such a

programme and compared them with a control group taking part in more traditional programmes. They showed significant differences favouring the experimental group on these measures as well as enhanced communication development. The nontraditional features of their programme included early intensive use of sign language (taught by a visiting Deaf adult) and the emphasis on family counselling. This has developed (Greenberg & Kusché, 1988, 1993) as the PATHS project (Promoting Alternative THinking Strategies), and it has had an increasingly strong influence on Deaf education. It proposes an ABCD (Affective-Behavioural-Cognitive-Dynamic) model of social and emotional development, concentrating on the promotion of interpersonal problem-solving skills, and is evaluated by Hindley (1997). In the U.K. it is currently being developed in association with the National Deaf Children's Society as the "Deaf Children in Mind" project, which has been piloted in a number of schools and has recently been evaluated (Reed & Hindley, 1998).

These programmes lead to benefit for the whole family and aim to avoid the cultural divide between hearing parents and their deaf child, described earlier. A review of early intervention programmes for young hearing-impaired children (Meadow-Orlans, 1987) cites six "hallmarks of excellence":

- (1) A strong emphasis on parent counselling, either in a group or individually.
- (2) Audiology support (including hearing aid testing).
- (3) A commitment to developing speech and oral skills such as lip-reading.
- (4) The encouragement of sign language skills as being integral to the programme, thus avoiding the need for parents to make the painful decision between the two modes of communication.
- (5) A flexibility of approach, matching the programme to the family.
- (6) The presence of deaf people in the programme, either as staff or as resources to draw upon.

Cochlear Implantation

A brief overview of mental health aspects of cochlear implantation is included in the research review article by Hindley (1997). He outlines some of the ethical dilemmas and controversies in this area and the scope of involvement for mental health professionals, particularly in the selection of children most likely to benefit from implantation. It is notable that most of the research into the audiological, linguistic, and psychosocial aspects of cochlear implantation has been carried out by members of implant teams (Vernon & Alles, 1994), and has concentrated on parental rather than child-centred outcome measures (e.g. Quittner, Thomson Steck, & Rouiller, 1991; Kampfe et al., 1993). Little is known of the psychosocial consequences for the recipients themselves. Epidemiological studies showing that children in Partially Hearing Units show a higher incidence of mental health problems when compared with children at schools for the Deaf add weight to suggestions that children undergoing implantation are at risk of becoming "culturally homeless" (Evans, 1989). The shift towards a

“hearing” identity may cause the child confusion, and parental acceptance of their child’s deafness, as well as potential remedial communication strategies, may be delayed. Evans cites the surgical literature on hearing children’s expectations of general surgical interventions (e.g. Zamorski, Fischhoff, & Cuneo, 1969) to illustrate outcome fantasies of which adults may be completely unaware. Communication difficulties can exacerbate this and Evans gives his own example of a deaf child who thought that his congenitally absent hand would be restored to him after his mother’s hysterectomy. Interventions involving a change in body image, such as restoration of sight (Valvo, 1971; Von Senden, 1960) have a statistically significant incidence of psychological distress. Research is necessary regarding similar sequelae for cochlear implantation and in order to inform a role for mental health teams in rehabilitation and follow-up as well as assessment of suitability for implantation.

Conclusions

We have seen how deaf children comprise a heterogeneous group. It is impossible to conceptualise deaf children in a way that will predict the most appropriate form of assessment and treatment. Issues of language and communication have sometimes been seen to be both contributory to the cause of psychiatric disturbance and the key to its treatment. Should we continue to define this population in terms of their hearing impairment (“deaf children”) or should we conceptualise this population as “children who are deaf”?

There are a number of dilemmas about service provision to this small population of children with very specific needs that remain unresolved. Deaf children are geographically disparate and a proliferation of specialist services is impractical. Generic child mental health services sometimes develop a special interest in deafness and can work in tandem with specialist services where necessary. It is important that the child is not denied access to Deaf professionals. The debate about the role of Deaf professionals is coloured by difficulties of access to training (particularly in the nursing and medical professions) and will therefore continue.

As audiological medicine advances, mental health aspects of deafness embrace new areas and the possibilities of earlier diagnosis of deafness bring mental health services into contact with deaf children at an earlier age than before. The boundaries between health services and education become more fluid in this age-group, and coordination of services becomes increasingly vital. The politics of deaf education impinges ever more closely on preventative projects and signing policies are beginning to permeate educational authorities previously dedicated to oral methods.

Deaf children present mental health services with a number of complex issues. It is easy for services to become preoccupied with these children’s specific needs and easy for professionals to feel de-skilled by communication difficulties. It is essential to remember, therefore, that although their needs can indeed be complex, deaf children are first and foremost *children*.

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