

Behavioral disorders can be present with, or derive from, biopsychiatric disease (mood disorders, psychosis, attention-deficit hyperactivity disorder), organic impairment, and mental retardation. Although some of these children and adolescents have family history of behavioral disorders (which might indicate a genetic role), in most cases family, socio-economic, and environmental factors contribute heavily to the genesis of behavioral disorders. Conduct disorders can be complicated by drug abuse, alcoholism, AIDS, dropping out of school, and criminal behavior.

Only a fraction of children with this disorder are treated. Family and school intervention, psychotherapy, cognitive-behavioral therapy, and medications (psychostimulants, antidepressants, antipsychotic, anticonvulsants) have been successful.

The most important preventive measure is the establishment of a strong and cohesive family, with a clear policy of child-rearing practices, stressing the importance of religious and social factors.

—*Marwan M. Al-Sharbaty*

*See also* Crime and Delinquency; Parenting and Disability.

#### Further Readings

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## **BELL, ALEXANDER GRAHAM** (1847–1922)

*American (Scottish-born) inventor and scientist*

Alexander Graham Bell, inventor of the telephone, was one of the foremost proponents of a nineteenth-century

oralist movement in Deaf education. Bell used his international fame to promote a philosophy that American deaf children should be taught to speak and taught only through articulation and speech-reading, with no use of sign language. The oralist ideology was very much a product of its times, riding the late-nineteenth-century wave of nativism and social Darwinism to promote a view that Deaf people should be linguistically and socially assimilated into a monolingual, auditory, speaking society.

Bell was one of a number of scientists interested in questions of heredity who would go on to found the American eugenics movement. Among his publications was the 1883 *Memoir on the Formation of a Deaf Variety of the Human Race* in which he claimed the intermarriage of Deaf people would invariably lead to a Deaf subset of humanity. This claim proved false, but would recur periodically among scientists and the general public over the next decades.

Bell was born to a Scottish elocutionist and his deaf wife in Edinburgh on March 3, 1847. His marriage to one of his first deaf pupils, Mabel Hubbard, was by all accounts a happy one, lasting 45 years. Both his mother and his wife did not use sign language. Bell died on August 2, 1922, in Nova Scotia, Canada.

—*Joseph J. Murray*

*See also* Audism; Deaf Culture; Eugenics; Sign Language; Speech and Language Pathology.

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## ▣ BELL'S PALSY

Bell's palsy was named in honor of, but not by, the Scottish surgeon-anatomist (1774–1842) who discovered in 1821 the difference between the fifth cranial nerve that gives the face sensation (trigeminal nerve) and the seventh cranial nerve that gives the face expression (facial nerve).

Bell's palsy refers to a specific type of sudden, unexpected onset of facial paralysis on one side of the face and is the most common cause of facial paralysis in all age groups. It is a diagnosis of exclusion (idiopathic), meaning that all other causes of facial paralysis have been sought and excluded. This distinction is important because there are definable other causes of sudden facial paralysis that should be detected and treated differently; some of these may be quite dangerous, such as cancer, nonmalignant tumors, infections, and trauma.

Recently, herpes simplex virus, type 1, the common cause of fever blisters, has been implicated as a cause of some cases of Bell's palsy. Because of this, antiviral medications have begun to be used in conjunction with orally administered corticosteroids, such as prednisone, a commonly used treatment for Bell's palsy. However, there is little scientific evidence to prove these treatments are helpful.

The physical impairment from Bell's palsy falls in two time domains, immediate and late. Immediate impairment is the dysfunction of the facial nerve (seventh cranial nerve), resulting in complete paralysis or

partial paralysis (also known as paresis). The resulting disability from this impairment is the inability to close the eyelids, thus failing to lubricate and protect the eye; the inability to express emotions or produce voluntary movements, such as smiling, on that side; and difficulty eating with the mouth fully closed. Because all cases of Bell's palsy recover to some degree, but not necessarily to normal, late impairments are common. Late impairments are permanent paresis, synkinesis, and contracture. Synkinesis is the concurrent movement of a portion of the face in a region other than the one voluntarily or emotionally moved, for example, winking when trying to smile. Contracture is the increased resting tone of the side of the face, which leaves the patient with an eye more closed than normal and a mouth with a permanent smirk. Disabilities from these late impairments are the inability to express oneself completely, especially smiling and softening of the eyes in the smiling process, and the inadvertent transmission of incorrect nonverbal facial messages, such as winking while eating or permanently smirking. Excessive tearing while eating, known as "crocodile" tears, may occur and impair or distort communication, such as tearing in one eye during a romantic dinner.

Facial expressions in human communications are important in both the receptive and the expressive modes. Because Bell's palsy is more common during the teenage and early adult years, times of important social development, the disabilities may be especially socially traumatic. Similarly, infants learn to detect facially expressed emotions and develop accordingly. Facial disfigurement may be distressing to the receptive infant and to the expressive sibling, parent, or grandparent who may look quite different with Bell's palsy.

—*J. Gail Neely*

*See also* Neurological Impairments and Nervous Disorders; Paralysis.

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