Traumatic Brain Injury

TBI is any injury to the brain caused by some external force (car accidents, falls, etc.) that results in any impairment of a person’s psychosocial or intellectual performance. Injuries are classified as OPEN HEAD INJURIES (involving the exposure or penetration of the brain) and CLOSED HEAD INJURIES (often simply called concussions.) pp. 460-463

TBI often goes undiagnosed and unrecognized, as it can be difficult to see a “broken brain” if physical behavior isn’t immediately affected. 0.5% of school-age children acquire brain injuries each year, and in a given graduating class, 4% experience the lasting effects of TBI. pp. 461-462

Rough games like football are under scrutiny for subjecting students to high chances of acquiring TBI, and the effects of minor concussions on the brain has been proven to be cumulative, permanently changing brain function. (Shute, 2012)

Speech and/or language problems

MOTOR-SPEECH DISORDER: inability to understand and formulate speech due to brain injury. TBI sufferers often have difficulty communicating appropriately—finding words, constructing sentences, and navigating the social give-and-take of conversation are common challenges. p. 465

Other common problems

Difficulties with short-term memory are common, as are problems in acquiring, sequencing, and processing new information.

TBI sufferers can have difficulty keeping and maintaining attention and concentration; easily distracted.

TBI sufferers often experience emotional issues, such as seemingly unfounded and vacillating bouts of fear, aggression, irritability, and anxiety. p. 461

Coping

TBI sufferers often don’t realize they’ve suffered a debilitating injury, and can experience frustration and confusion when they are unable to function the way they did before their injury. p. 465

Considerations

Because students with TBI can become highly sensitive to environments that foster misbehavior, educators must take extra care to create environments that support appropriate behavior. Consistency, predictability, and positive reinforcement are important elements of a good environment.

Behavior Modification: To create specific changes in behavior, increase consistency in behavioral consequences. Can include modeling, guided practice, desensitization, other strategies. pp. 466

Deaf-Blindness

Definition and criteria of deaf-blindness varies from state to state.

Someone who has both visual acuity of 20/200 or less in the better eye with corrective lenses or has difficulties with peripheral vision or has progressive visual loss as in usher syndrome; and the chronic hearing impairment so severe that most speech cannot be understood even with optimum amplification.
- Federal Government reported 529 students ages 6-11 were receiving services nationwide in 2007. p. 467-468

Causes

Genetic/Chromosomal

**CHARGE syndrome**: is characterized by a number of physical abnormalities.
- C= Coloboma: Cranial nerves
- H= Heart defects
- A= Astesia of the choanae: Absence or closure of air passage at birth.
- R= Retardation in growth and mental development
- G= Genital abnormalities
- E= Ear malformation and/or hearing loss

**Usher Syndrome**: is characterized by hearing impairment and retinitis pigmentosa, which causes progressive deterioration in eye sight.
- Caused by a mutation in any one of 11 different genes

**Down Syndrome**: most often noted as a cause of intellectual disability but is also sometimes associated with deaf-blindness.
- Not inherited, results from damaged chromosomal material.

Prenatal Conditions

**Rubella (German Measles)**: If pregnant mother has this especially during first trimester, it can lead to a variety of disabilities, including deaf-blindness.

**Congenital Cytomegalovirus (CMV)**: If a child is born with CMV, a herpes virus, they are at risk for disabilities, including deaf-blindness.

Postnatal Conditions

**Meningitis**: Infection of the covering of the brain
**TBI**: Traumatic Brain Injury
pp. 468-471

Students will have problems with:

**Accessing Information**: More difficult to access sources of information such as internet, TV, newspapers, etc.

**Communicating**: Largest obstacle faced by this disability and the world even from birth can seem threatening.

**Navigating the Environment**: Can not receive visual or auditory cues in order to navigate themselves.
pp. 471-472

Educational Needs

**Direct Teaching**: Students cannot receive information from what is happening around them they need a teacher to be directly teaching them.

**Structured and Predictable Routines**: This will project a sense of security

**Communication**: Hands play a critical role.
- Braille
- Hand-over-hand and Hand-under-hand Guidance
- Adapted Signs: where signs are received by feeling the signers hands
- Touch Cues: Signals that convey a message, such as a pat or tap on the head.

**Orientation and Mobility**: Training is vital for mobility. pp. 472-476

**Usher Syndrome**: This is a progressive disability, students need to be prepared for what disabilities they will eventually have even far in the future. pp. 470
Other Students W/ Low-incidence, Multiple, & Severe Disabilities

Considerations

Communication
When oral language is difficult or impossible, students can use Augmented or Alternative Communication (AAC). AAC is any manual or electronic means by which a person expresses wants and needs, shares information, engages in social closeness, or manages social etiquette. AAC can be designed for students at any cognitive level who are unable to communicate effectively through speech due to a physical impairment. Some reasons students need AAC include if they cannot make speech sounds, cannot make his/herself understood b/c environmental noise, or if they have difficulty producing words (Hallahan et. al., 2012, p. 384). Some types of AAC are “aided” (rely on the user’s body) while others are “unaided” (rely on tools or equipment in addition to the user’s body). (Hallahan et. al., 2012, p. 384)

Examples of AAC used in schools:
- Manual Signing (e.g., ASL, Simplified Sign Language, fingerspelling, etc.)
- Gestures
- Vocalizations (including core vocabulary)
- Communication boards
- Picture Exchange Communication System (PECS)
- Speech Generating Devices (SGDs) or Voice Output Communication Aids (VOCAs)
  - e.g., iPads, computers, electrolarynx, etc.
  - can be digitized or synthesized

Behavior Management
- self-stimulation, self-injury, tantrums, aggression
- FBA and PBIS - common models for assessment and intervention

Early Intervention is IMPORTANT and should be:
- research-based
- values-based
- family-centered
- multicultural
- cross-disciplinary
- age-appropriate
- feature normalization/integration

Transition to Adulthood
Should:
- Be person-centered
- feature vocational skill development
- include domestic skills
- within the context of community
References
link for this book: http://books.google.com/books?
hl=en&lr=&id=P0Vy9mthqEC&oi=fnd&pg=PA479&dq=Traumatic+Brain+Injury&ots=fsTWZWsKww&sig=
wbfVYzTLVe8hE_yAFUpn34FQ#v=onepage&q=Traumatic%20Brain%20Injury&f=false

Link for the book: http://books.google.com/books/about/Deaf_Blind_Infants_and_Children.html?id=1OLnbDERDbwC


OTHER PRACTICAL RESOURCES

Behavior modification how-to guide: http://www.ldonline.org/article/6030/
TBI education strategies: http://www.cbirt.org/tbi-education/
Deaf/blind resources: http://www.nationaldb.org/
AAC Language plans/materials/resources: http://www.aaclanguagelab.com/resources
AAC devices/plans/resources: http://www.aaclanguagelab.com/
National Dissemination Center for Children with Disabilities http://nichcy.org/disability/specific/multiple
Project IDEAL Online http://www.projectidealonline.org/multipleDisabilities.php