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Multiple Intelligences in Children: Identification and Applications

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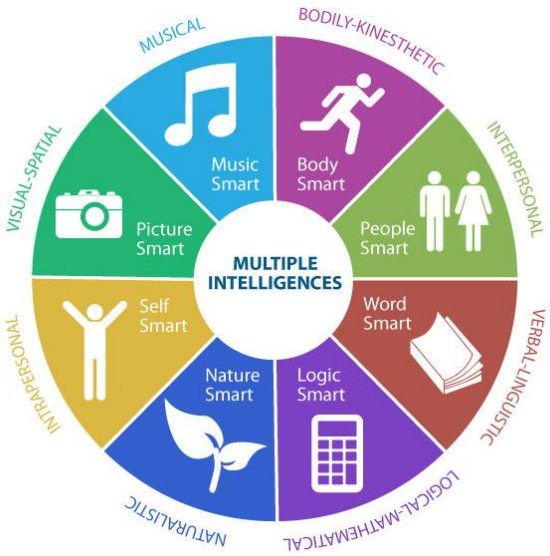
According to a traditional definition, intelligence is a uniform, fixed cognitive capacity people are born with. This capacity can be easily measured by short-answer tests, but this traditional view has many limitations. Instead, Dr. Howard Gardner (1983) proposed theory of multiple intelligences to account for a broader range of human potential in children and adults. He defined the first seven intelligences in frames of mind (1983). He added the last two in Intelligence Reframed (1999). Dr. Gardner says that our schools and culture focus most of their attention on linguistic and logical mathematical intelligence. However, we should also place equal attention on individuals who show gifts in the other intelligences.

Gardner states that,

- Intelligence is the ability to find and solve problems and create products of value in one's own culture.
- All are smart. We are smart in different ways. One way is not better than another.
- All human beings possess all nine intelligences in varying amounts.
- Each person has a different intellectual composition.
- These intelligences are located in different areas of the brain.
- These intelligences may define the human species.



- These multiple intelligences (MI) can be nurtured and strengthened, or ignored and weakened.
- There is no hierarchy in importance among the intelligences.

Following is the brief description of these intelligences:

1. Verbal-linguistic intelligence: Well-developed verbal skills and sensitivity to the sounds: meanings and rhythms of words. (Journalist, teacher, lawyer)

2. Mathematical-logical intelligence: Ability to think conceptually and abstractly and capacity to discern logical or numerical patterns (engineer, programmer, accountant)

3. Musical intelligence: Ability to produce and appreciate rhythm, pitch and timber. (Musician, composer, disc jockey)

4. Visual-spatial intelligence: Capacity to think in images and pictures to visualize accurately and abstractly. (Navigator, sculptor, architect)

5. Bodily-kinesthetic intelligence: Ability to control one's body movements and to handle objects skillfully. (Athlete, firefighter, actor)

6. Interpersonal intelligence: Capacity to detect and respond appropriately to the moods, motivations and desires of others, (counselor, politician, salesman)

7. Intrapersonal intelligence: Capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes. (Researcher, novelist, entrepreneur)

8. Naturalist intelligence: Ability to recognize and categorize plants, animals and other objects in nature.. (Environmentalist, farmer, botanist)

9. Existential intelligence: Sensitivity and capacity to tackle deep questions about human existence, such as meaning of life, why do we die, and how did we get here. (Philosopher, theorist)

Many scales are available free on internet. One can use one of them depending upon the age of child and expected application of the scale.

MI and Developmental Disorders

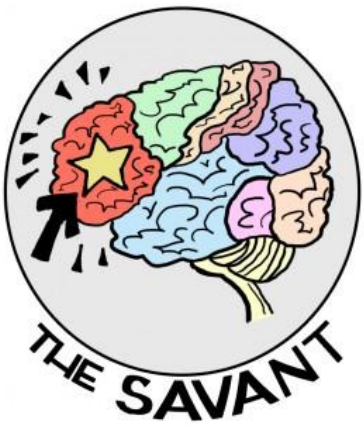
Pediatricians in their routine pediatric practice encounter many developmental disorders in children. As these disorders are on the confluence of medicine, education and psychology; their management is challenging. MI approach can be used as a holistic tool to manage these disorders in simplistic, child oriented way. Here are some examples.

MI and LD: Students with learning disabilities have long been receiving inappropriate labels and treatment, because of their learning differences. While comparing LD and non-LD students; the musical, bodily/kinesthetic, Intrapersonal, and natural intelligence scores in two groups showed no significant difference. Results also showed: non-LD students were substantially higher in the linguistic. Logical/mathematical and interpersonal intelligence scores, which are commonly assessed and used in routine academics. Interestingly the visual-spatial intelligence scores in LD students were significantly higher than the regular students. Visual-spatial children remember what they see, so use visuals and hands-on experiences (Mahnaz Akhavan Tafti, 2014).

MI and ADHD:

ADHD is now a day very common developmental disorder seen in children and has direct impact on the performance (academic as well as social) of the child. Educators try to find weaknesses in ADHD children and try to help them with medications, behavioral therapy and academic inputs. According to Thomas Armstrong (1999); one needs to look beyond a "deficit" approach to ADHD and embrace a more holistic view of learners that includes teaching to their multiple intelligences, especially using bodily kinesthetic, musical and naturalistic intelligences.

MI and Autism:



Children with Autism Spectrum Disorder fail to perform on traditional intelligence tests but they may perform on Multiple Intelligences Scales. Among the 10% of persons who are autistic, there is a wide spectrum of savant abilities. Savant skills can be observed as exceptional memory or exceptional musical or artistic skills in children with autism spectrum disorder. This can be explained by the Weak Central Coherence hypothesis which assumes that people with an autism spectrum disorder tend to have difficulty processing global information, such as context-dependent information; thus, these people frequently show processing biases in favor of local features. This result in a unique cognitive profile of individuals with autism where they show a bias towards processing local, detailed information and a corresponding weakness in extracting global form or meaning (Happe, et al, 2006). As Gardner indicated with MI theory, if musical and artistic abilities are recognized as intelligence, children with savant syndrome can demonstrate exceptional skills in some domains.

MI and emotional disturbances:

Traditional psychometric tools are having limitations in assessing children with emotional disturbances like anxiety, depression etc. Gardener's theory of MI comes handy in these children also. The two intelligences namely interpersonal and intrapersonal intelligences correlate well with emotional disturbances (Moshe Zeidner, et al, 2009).

MI and adolescence:

Adolescents are at the age where they become fully aware of themselves as people. They realize that they are part of a society and they begin to branch out in their thinking. Their thoughts become more abstract and logical. However, in adolescents, because of puberty, the emotional side of the brain is working in overdrive. All of these factors contribute to the way adolescents function and behave. Adolescents also grow physically during a short period of time during their teenage years and this can cause some to become self-conscious (Gurpreet Kaur et al 2008). This turmoil affects all the intelligences in adolescents; especially the interpersonal and intrapersonal ones. The theory of multiple intelligences is an excellent tool or resource for teaching young adolescents because it allows them to explore and nurture their own abilities on various intelligences.

Gardner's Multiple Intelligences theory is a very useful model for developing a systematic approach to nurturing and teaching children and honoring their individual needs and strengths. To extend this idea further; we can utilize this knowledge to understand developmental disorders in a new light and help such children to overcome the problems with their own strengths! As pediatricians; we can use this novel tool to connect better with children as well as parents.