ABSTRACT

This paper focuses on the conceptual understanding of mental retardation, its etiology psychopathology and treatment. Mental retardation (MR) or intellectual disability (ID) is a descriptive term for sub average intelligence and impaired adaptive functioning arising in the developmental period (< 18 y). MR/ID and other neurodevelopment disabilities are seen often in a general pediatric practice. Interest in the emotional problems and mental health issues of persons with MR is a long standing concern. It was noted that throughout the 19th century there was active discussion of the possible relationship between mental illness and developmental disabilities. Positions that were taken included: (a) persons with mental retardation commonly experienced a wide range of emotional disorders; (b) persons with severe and profound mental retardation were incapable of showing mental illness; (c) that mental retardation could be a cause of mental illness; and, (d) that both mental retardation and mental illness arose out of a common cause. The true prevalence of mental handicaps in children must be much higher than the reported figures, because most surveys have dealt with only severe cases; mild cases are difficult to measure using the available psychometric tests because of doubtful reliability when applied to children. Some mental handicaps appear regularly together; this is seen in the association of neurodevelopment abnormalities in 7-10 year-olds.

INTRODUCTION

Mental retardation is a serious and lifelong disability that places heavy demands on society and the health system. The conceptualization of mental retardation includes deficits in cognitive abilities as well as in behaviours required for social and personal sufficiency, known as adaptive functioning. Autism and mental retardation are two of the most frequently diagnosed developmental disorders. They are particularly complex to diagnose and treat because of the high degree of behavioral inconsistencies and interfere with the ability to use standardized tools. (Schopler, Reichler and Renner 1988).

Priyanka Behrani: Asstt. Professor, Dept of Psychology, M.S. University, Baroda.
The prevalence of mental retardation range from 1% to 3% of the population. The incidence of mental retardation is difficult to calculate because mild mental retardation sometimes goes unrecognized until middle childhood. In some cases, good adaptive skills are not challenged until late childhood or early adolescence, even when intellectual function is limited. (Sadock and Sadock, 2007)

**NOMENCLATURE**

Defining mental retardation accurately has challenged clinicians over the centuries. In 1800s the notion that mental retardation was based primarily on a deficit in a social or moral reasoning was promoted. Since then, the addition of intellectual deficit added to the concept of inadequate social function. All classification systems retain the understanding that mental retardation is based on more than intellectual deficits that is, it also depends on lower than expected level of adaptive function.

The American Association on Mental Retardation (AAMR, 1983) defines, “mental retardation refers to significantly sub average general intellectual functioning, resulting in or associated with concurrent impairments in adaptive behaviour, and manifested during the developmental period.”

DSM IV-TR defines mental retardation as the “essential feature of mental retardation is significantly sub average general intellectual functioning (criterion A) that is accompanied by significant limitation in adaptive functioning in at least two of the following skill areas: communication, self care, home living, social/interpersonal skills, use of community resources, self direction, functional academic skills, work, leisure, health, and safety (criterion B). The onset must occur before age 18 years (criterion C).”

Terminology for MR/ID has been particularly challenging as the term mentally retarded carries significant social and emotional stigma. The American Association for Intellectual and Developmental Disability (AAIDD) has been particularly influential in terminology changes such that most professionals working in the field now refer to mental retardation as intellectual disability. The DSM-V is expected to adopt this new terminology (Schroeder, Gerry, Gertz and Velasquez, 2002).

Mental retardation (MR) or intellectual disability (ID) is a descriptive term for sub average intelligence and impaired adaptive functioning arising in the developmental period (< 18 years). MR/ID and other neurodevelopmental disabilities are seen often in a general pediatric practice.

Developmental delay is often used inappropriately as synonymous with MR/ID. Developmental delay is an overly inclusive term and should generally be used for infants and young children (< 5 years) in which the diagnosis is unclear, such as those too young for formal testing.

There are four degrees of severity specified in DSM IV-TR, reflecting the level of intellectual impairment:

- **Mild Mental Retardation**: IQ level 50–55 to approximately 70
- **Moderate Mental Retardation**: IQ level 35–40 to 50–55
- **Severe Mental Retardation**: IQ level 20–25 to 35–40
- **Profound Mental Retardation**: IQ level below 20 or 25

Mild mental retardation is roughly equivalent to educational category of “educable”. This group constitutes the largest segment about 85% of those with the disorder. They develop social and communication skill in preschool years, have minimal impairment in sensorimotor areas, and often
are not distinguishable from normal children until a later stage. They can acquire academic skills up to 6th grade level. In their adult years they usually achieve social and vocational skills adequate for minimum self support and may need supervision in times of stress.

**Moderate mental retardation** is roughly equivalent to educational category of “trainable”. This constitutes 10% of the entire population with mental retardation. Most of the individuals with this level acquire communication skills during early childhood years. The vocational training helps them and with moderate supervision can attend to their personal care. They can benefit from school up to level of 2nd grade. They are able to perform unskilled or semiskilled work under supervision in sheltered workshops in their adulthood.

**Severe mental retardation** constitutes 3 to 4 % of population with mental retardation. During the early childhood years they acquire little or no communicative speech. During the school age period they may learn to talk to and can be trained in elementary self care skills. They can only recognize alphabets and numbers in academic area. In adult years they may be able to perform simple tasks in closely supervised setting. They adapt socially unless there is associated handicap.

**Profound mental retardation** constitutes approximately 1 to 2 % of people with mental retardation. Most of the people in this category have an identified neurological condition. During the early childhood they display considerable impairment in sensorimotor functioning. Motor development and self care may improve with individualized and closed supervision.

**DIAGNOSIS**

There are about two frequent pitfalls in the diagnostic process of individuals with mental retardation (i) diagnostic over shadowing, which refers to using the diagnosis of mental retardation as the explanation for whatever is wrong with the individual instead of using standardized diagnostic criteria and (ii)diagnostic presumption, which refers to the assumption of a psychiatric diagnosis based exclusively on the association with mental retardation. (Sundheim et al 2006).

Patients with mental retardation have trouble verbalizing their difficulties. They might express their reaction to some illnesses that cause pain with irritability, aggression and self abusive behaviours. The optimal assessment for persons with mental retardation should be carried out in the context of a diagnostic team: pediatrician and other physician specialists, educators and behavioural specialists. When working with persons with mental retardation, the examiner may need to modify the interview to work around the linguistic limitation. Systematic observation of the patient is fundamental for understanding the behaviours in question and for developing an effective communication. This means that even for patients with communication difficulties the individuals may be able to use sign language or use a picture book or respond to yes or no question to facilitate interview. (Cepeda 2010).Subjective experiences may be cautiously inferred from facial expressions and body language(Sundheim et al .2006)

In the 1980s a wide range of instruments were developed to assess psychopathology in this population (Aman, 1991; Sturmey et al., 1991). There are now several general screens for psychopathology in persons with developmental disabilities (Kazdin et al., 1984; Matson, 1988; Matson et al., 1991; Paclawskj et al., 1997), as well as general protocols and guidelines for assessment (Nezu et al., 1992; Pyles et al., 1997; Singh et al., 1991; Sturmey, 1995).
MR originates during the developmental period (i.e., conception through age 18 years) and results in significantly sub average general intellectual function with concurrent deficits in functional life skills. The diagnosis of MR requires an intelligence deficit of at least 2 standard deviations (SDs) below the mean IQ. This generally translates into an intelligence quotient (IQ) score of 70-75, given a population mean of 100. Equivalent deficits in at least 2 areas of functional life skills or adaptive skills also must be present to meet the diagnostic criteria for MR. Adaptive skills encompass functional life skills within the domains of communication, self-care, home living, social and interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety.

The presenting symptoms and signs of MR/ID typically include cognitive skills delays, language delay, and delays in adaptive skills. Developmental delays vary depending on the level of MR/ID and the etiology. For example, in mild non syndromic MR/ID, delays may not be notable until the preschool years, whereas with severe or profound MR associated with syndromes or extreme prematurity, for example, significant delays in milestones may be noted from birth.

- **Language delay**: One of the first signs of MR/ID may be language delays, including expressive language (speech) and receptive language (understanding). Red flags include no mama/dada/babbling by 12 months, no 2-word phrases by age 2, and parents reporting they are concerned that the child may be deaf.

- **Fine motor/adaptive delay**:
  - Significant delays in activities such as self-feeding, toileting, and dressing are typically reported in children with MR/ID.
  - Prolonged, messy finger feeding and drooling are signs of oral-motor in-Coordination.

- **Cognitive delay**: Children with MR/ID have difficulties with memory, problem-solving and logical reasoning. This may be expressed early on with pre academic difficulties or difficulty following directions (particularly multipart directions).

- **Social delays**: Children with MR may display lack of interest in age-appropriate toys and delays in imaginative play and reciprocal play with age-matched peers. Rather than their chronological age, play reflects their developmental levels.

- **Gross motor delay**:
  - Delays in gross motor development infrequently accompany the cognitive, language, and fine motor/adaptive delays associated with MR/ID unless the underlying condition results in both MR/ID and cerebral palsy.
  - Subtle delays in gross motor acquisition, or clumsiness, may be identified in the developmental assessment.

- **Behavioural disturbances**:
  - Even before an age at which psychopathology can be identified, infants and toddlers who go on to have MR/ID may be more likely to have difficult temperaments, hyperactivity, disordered sleep.
  - Associated behaviours may include aggression, self-injury, defiance, inattention, hyperactivity, sleep disturbances, and stereotypic behaviours.
• **Neurologic and Physical Abnormalities:**
  - Prevalence of MR is increased among children with seizure disorders, microcephaly, macrocephaly, history of intrauterine or postnatal growth retardation, prematurity, and congenital anomalies.
  - In the process of addressing somatic problems, assessment of a child’s cognitive abilities is often overlooked.

**Family History**

Guidelines from the American Academy of Pediatrics recommend that the evaluation of a child with MR/ID includes an extensive family history, with particular attention to family members with mental retardation, developmental delays, consanguinity, psychiatric diagnoses, congenital malformations, miscarriages, stillbirths, and early childhood deaths. The clinician should construct a pedigree of 3 generations or more (Moeschler and Shevell 2006).

**CAUSES OF MENTAL RETARDATION**

**Prenatal Causes:** Etiological factors may be primarily biological, psychosocial and some combination of both. In approximately 30%-40% of individual seen in the clinical setting no clear etiology for the mental retardation can be determined despite extensive evaluation efforts. Specific etiology is more likely to be identified in individuals with severe or profound mental retardation. The major predisposing factors include:

- **Heredity:** These factors include inborn errors of metabolism inherited mostly through autosomal recessive mechanisms for example Tay sach’s disease, other single gene abnormalities with mendelian and variable expressions for example tuberculoses and chromosomal aberrations like translocation Down Syndrome, Fragile X syndrome. Advances in genetics will likely increase the identification of mental retardation.

- **Early alteration of embryonic development:** These factors include chromosomal changes like Down syndrome due to trisomy or parental damage due to toxins like maternal alcohol consumption, Infections.

- **Environmental influences:** these factors include deterioration of nurturance and of social, linguistic, and other stimulation.

- **Mental disorder:** These factor include Autistic Disorder And Other Pervasive Development Disorder.

- **Pregnancy and prenatal problem:** These factors include foetal malnutrition, prematurity, hypoxia, viral and other infections and trauma.

- **General medical conditions acquired in infancy or childhood:** These factors include infections, traumas and poisoning for example due to lead.

**THE RELATIONSHIP OF PSYCHOPATHOLOGY AND MENTAL RETARDATION**

Both clinical literature and empirical studies demonstrate that persons with mental retardation experience the same range of emotional disorders as the general population (Sevin and Matson, 1994). The variety of problems of maladjustment includes affective disorders, anxiety disorders,
psychoses, personality disorders, psychosexual disorders, aggression and impulse control disorders, and somatoform disorders. It has not always been accepted that this range of psychopathology existed (Sovner and Hurley, 1983). Individuals with mental retardation and other developmental disorders are at greater risk for psychiatric disorders due to CNS dysfunction, peer rejection and decreased coping strategies (Cook and Laventhal 1992). It is now clear that there are no major classifications of psychopathology that cannot coexist with mental retardation (Sevin and Matson, 1994). There are no psychiatric disorders that can be ruled out simply because the individual presents with mental retardation. The term dual diagnosis has been used to describe the coexistence of mental illness and mental retardation.

The attempts to classify psychopathology in persons with mental retardation face a number of specific challenges. For one thing, there is no agreed definition of psychopathology in this population. Further, there is uncertainty concerning the nature of the relationship between mental retardation and behavioural or emotional problems. Also, current standard taxonomies do not provide a framework of adequately established validity and reliability. Definition of psychopathology in persons with mental retardation is as follows:

“Where behaviour and emotions are abnormal by virtue of their qualitative or quantitative deviance, and cannot be explained on the basis of developmental delay alone, and cause significant distress to the child careers or the community, as well as significant added impairment, then they are regarded as disordered. Where the overall clinical presentation of the person shows evidence of such disturbed behaviours and emotions, then the person is regarded as psychiatrically disordered.” (Einfield and Aman 1995)

Compared to even a decade ago, more psychologists, psychiatrists, and other mental health professionals are receiving specialized training in mental retardation (Day, 1999). Even so, many professionals still lack this knowledge, and diagnostic overshadowing is present in studies examining professional judgments of hypothetical clinical situations (White et al., 1995). It remains unclear how diagnostic overshadowing varies by clinical situation, professional discipline, or patient characteristics (Borthwick-Duffy and Eyman, 1990). Ironically, even under the cloud of diagnostic overshadowing, one of the most robust research findings to date is that, relative to the general population, persons with mental retardation are at increased risk for psychiatric illness, and severe behavioural or emotional dysfunction. Using representative samples of children with mental retardation, it was found 30% who showed psychopathology, compared to just 6% of children without development delay (Rutter, Tizard, Yule, Graham, and Whitmore 1976). These rates are remarkably similar to another study who found psychopathology in 36% of children with mental retardation versus 5% of those without developmental disabilities (Koller, Richardson, Katz, and Mc Claren 1983). Comparable figures are found among adults with and without mental retardation (Gostason, 1985). Yet rates of psychopathology vary greatly, depending in part on the method used to ascertain subjects. Among 100 children with mental retardation referred to a psychiatric clinic for evaluation, as many as 87% were diagnosed with a mental disorder (Phillips and Williams, 1975).

A range of views and approaches has emerged concerning the relationship of behavioural and emotional disturbance to mental retardation. There is no general acceptance that such problems are best viewed as mental health issues. The educational model sees behavioural disturbance as reflecting
“challenging behaviours” in persons who have deficits with the behavioural model, maladaptive behaviours are seen as perpetuated according to learning principles.

A mental disorder model assesses behavioural disturbance to determine if such behaviours are the consequence of mental disorders. Within the mental disorder, or psychiatric, model there is also a discrepancy of views. One view emphasizes the similarity between the psychiatric Problems of children with mental retardation and without retardation (Philips 1967 and Menolascino 1988). And other on the difference of the problem.

A second view distinguishes between “behavioural problems” and “psychiatric problems.” In this conceptualization, psychiatric problems (e.g., major depression or schizophrenia) are regarded as the same as those seen in the general population, but at least some behaviour problems are regarded as having little or no psychiatric significance (Reid, 1982).

A third view is that the psychiatric disorders seen in the normal population also affect persons with mental retardation, but that a number of other behaviours may be unique or significantly more common in persons with mental retardation. Hence, new psychiatric symptoms, syndromes, or disorders may need to be proposed for people with mental retardation (McLean, 1991). One such new syndrome is stereotyped, combined with hyperactivity and severe mental retardation.

Disabilities are a long standing concern. Throughout the 19th century there was active discussion of the possible relationship between mental illness and developmental disabilities developmental disabilities (Turner, 1989). Positions took included: (a) persons with mental retardation commonly experienced a wide range of emotional disorders; (b) persons with severe and profound mental retardation were incapable of showing mental illness; (c) that mental retardation could be a cause of mental illness; and, (d) that both mental retardation and mental illness arose out of a common cause and, both were forms of degeneration.

**Comorbidity:** Epidemiological surveys indicate that up to two thirds of children and adults with mental retardation have co morbid mental disorders; this rate is several times higher that in the community samples of those not mentally retarded. The prevalence of psychopathology seems to be correlated with the severity of mental retardation; the more severe the mental retardation the higher the risk for other mental disorders. In one of the research, the severity of retardation affected the type of psychiatric disorder. Disruptive and conduct disorder behaviours occurred more commonly in the mildly retarded group; the more severely retarded group exhibited psychiatric problems more often associated with Autistic disorder, such as self stimulation and self mutilation. In contrast in the epidemiology of psychopathology in children in general, age and sex do not affect the prevalence of psychiatric disorder in this study. Those with profound mental retardation were less likely to exhibit psychiatric symptoms.

The mental disorders that among persons with mental retardation appear to run the gamut of those seen in persons with no retardation, including mood disorders, schizophrenia, Attention deficit hyperactivity disorder and conduct disorder. Those worth severe mental retardation have a particularly high rate of Autistic disorder and pervasive developmental disorder. About two to three per cent of persons with mental retardation meet the criteria for schizophrenia; this percentage is several times higher than the rate for the general population. Up to 50% of children and adults with mental retardation had a mood.
Highly prevalent psychiatric symptoms that can occur in persons with mental retardation outside the context of a mental disorder include hyperactive and short attention span, self-injurious behaviours like head banging, and self biting, and repetitive stereotypical behaviour like hand flapping and toe walking. Personality styles and traits in children with mental retardation is not unique to them, but negative self-image, low self-esteem, poor frustration tolerance, interpersonal dependence and a rigid problem-solving styles are overrepresented. Specific causal syndromes seen in mental retardation can also predisposed affected persons to various types of psychopathologies.

**Treatment:** The treatment of individuals with mental retardation is based on an assessment of social, educational, psychiatric, and environmental need. Mental retardation is associated with a variety of co-morbid psychiatric disorders that often require specific treatment, in addition to psychosocial support. Of course, when preventive measures are available, optimal treatment of conditions that could lead to mental retardation include primary, secondary, and tertiary prevention.

**Primary prevention:** Primary prevention concerns actions taken to eliminate or reduce the condition that lead to development of the disorders associated with mental retardation. Such measures will include education to increase the general public’s knowledge and awareness of mental retardation.

**Secondary and tertiary Prevention:** Once a disorder associated with mental retardation has been identified, the disorder should be treated to shorten the course of the illness and to minimize consequent disabilities. Hereditary metabolic and endocrine disorders can be treated effectively in an early stage by dietary control or hormone replacement therapy. Children with MR frequently have emotional and behavioural difficulties requiring psychiatric treatment modalities based on their level of intelligence.

**Education:** Educational settings for children with mental retardation should include the program for training in adaptive skills, social skills and vocation. Particular attention should focus on communication and efforts to improve the quality of life. There should be special provision for remedial teaching by special educators who are equipped to handle children with mental retardation.

**Behavioural, cognitive and psychodynamic therapies:** The difficulties in adaption in individuals with mental retardation are widespread and so varied that several interventions alone or in combination may be helpful. Behaviour therapy has been used for many years to shape and enhance social behaviour and to control and minimize aggressive and destructive behaviour. Positive reinforcement for desired behaviour and benign punishment for example loss of privileges for objectionable behaviour have been harmful. Cognitive therapy such as the false beliefs and relaxation exercise with self instruction has also been recommended for persons with mental retardation who can follow instruction. Psychodynamic therapy has been used with individuals with mental retardation and their families to decrease conflicts about expectations that may result in anxiety, anger and depression.

**Working with family:** Family of the persons with mental retardation can be educated to maintain realistic expectations from person and enhance and competence. The family of persons with mental retardation often find it difficult to balance the fostering of independence and providing the nurturing and supportive environment. They can benefit from continuous counseling or family therapy and should be given the opportunity to express their guilt, anguish, frustrations, helplessness and recurring denial about their child’s disorder and future.
Social intervention: People with mental retardation face a major problem of social skill deficit and social isolation. So areas of social skill improvement and developing social competence will help them to enhance their social interaction, friendships, and self esteem.

Persons with mental retardation present with a unique set of problems and issues to be considered in planning for their adaptation in community settings. It is the central thesis of this article that issues related to the mental health of these individuals should be considered in overall treatment planning. Professionals should be cognizant of apparent discriminatory tendencies within the field of mental health counseling that may yield differential service provision for persons with mental retardation. A number of observations and conclusion can be offered.

Individuals with mental retardation present the full range of psychopathology and a diverse range of personal and life concerns. The range of disorders and problems is heterogeneous. Further, the prevalence of mental health problems among persons with mental retardation appears to exceed that of the general population. Global treatment planning should consider social-emotional variables. There appears to be a tendency among mental health professionals to overlook, or ignore mental health problems in persons with mental retardation. Those involved in the assessment and planning phases need to safeguard against this bias.

CONCLUSION

Access to a wide array of community mental health services appears limited for persons with mental retardation. Intervention and treatment plans that include mental health services will likely require advocacy to insure service to the needy. When mental health problems are recognized, mental health intervention should be given consideration as a viable service option for persons with mental retardation. Mental health professionals should view persons with mental retardation, particularly those in the mild range, as suitable consumers of mental health counseling.

REFERENCES


Psychopathological Disorder: Biopsychosocial Analysis


