CHAPTER 1
INTRODUCTION

When we do the best that we can, we never know what miracle is wrought in our life, or in the life of another.

*Helen Keller*

In all the most beautiful creations of God there are mystical creations too. One of them is the “Mentally Challenged” children, as it is indeed a challenge to live with their anomalies. Mentally challenged children have a significant delay in physical, cognitive, behavioral, emotional, and social development in comparison with norms. Sometimes, the term is used for mental retardation, which is not a delay in development but rather a permanent limitation. At least eight percent of all children from birth to six years have developmental problems and delays in one or more areas of development (Beirne-Smith, Patton & Kim, 2005).

Mentally challenged children are one of the most frequently encountered, and most distressing disabilities in most industrialized and developing countries worldwide (Stein, Durkin & Belmont, 1987; Mitchell, Zhuo & Watts, 1990; Kiely, 1998; Chen & Simeonsson, 2000). Among Indian population, two percent of them is said to be suffering from some kind of mental disability. Mental retardation may occur as part of a syndrome or broader disorder but is most commonly an isolated finding (Donna, Holly & Grace, 2000).

The American Association on Intellectual and Developmental Disabilities (AAMR, 2002) has defined Mental Retardation (MR) as significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18. Intellectual limitations refer to an Intelligence Quotient (IQ) which falls into two standard deviations below the population mean of 100 (<70), and adaptive functioning limitations refer to impairments in at least two out of ten skill areas.

Children who have developmental disabilities learn at a slower pace than other children of a similar age do. They may experience delays in mastering
language, social skills and behaviors, problem solving skills, self-care skills, and memory skills. Because they have more difficulty in learning, children with developmental challenges may require special education classes, and a slower and more repetitive learning process (Fagel, 2012).

Development of an individual with mental retardation depends on the type and extent of the underlying disorder, the associated disabilities, environmental factors, psychological factors, cognitive abilities and co-morbid psychopathological conditions (Kumar, Singh & Akhtar, 2009).

1.1. CLASSIFICATION OF MENTAL RETARDATION

According to the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), three criteria must be met for a diagnosis of mental retardation: an IQ below 70, significant limitations in two or more areas of adaptive behavior (as measured by an adaptive behavior rating scale, i.e. communication, self-help skills, interpersonal skills, and more), and evidence that the limitations become apparent before the age of 18 (Simon, 2007).

It is formally diagnosed by professional assessment of intelligence and adaptive behavior. The following ranges, based on standard scores of intelligence tests, reflect the categories of the American Association of Mental Retardation, the Diagnostic and Statistical Manual of Mental Disorders-IV-TR, and the International Statistical Classification of Diseases-10 as shown in Table 1.

<table>
<thead>
<tr>
<th>Class</th>
<th>IQ</th>
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<tbody>
<tr>
<td>Profound mental retardation</td>
<td>Below 20</td>
</tr>
<tr>
<td>Severe mental retardation</td>
<td>20–34</td>
</tr>
<tr>
<td>Moderate mental retardation</td>
<td>35–49</td>
</tr>
<tr>
<td>Mild mental retardation</td>
<td>50–69</td>
</tr>
<tr>
<td>Borderline intellectual functioning</td>
<td>70–84</td>
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Generally, the mentally challenged children are classified under four classes of mental handicaps namely mild, moderate, severe and profound; mild and moderate are educable and go to school for studying although they cannot go on at the same pace as others of the same age. The severe and profound handicaps are only trainable.

Since the diagnosis is not based only on IQ scores, but must also take into consideration a person's adaptive functioning, the diagnosis is not made rigidly. It encompasses intellectual scores and adaptive functioning scores from an adaptive behavior rating scale. It is based on descriptions of known abilities provided by someone familiar with the person, and also the observations of the assessment by the examiner, who is able to find out directly from the person what he or she can understand, communicate, and the like (AAMR, 2002).

1.2. CONCEPTUAL FRAMEWORK OF THE DEVELOPMENT OF MENTALLY CHALLENGED CHILDREN

The conceptual framework of the developmental problems that leads to the mental disability is depicted in Figure 1 and narrated thereafter.
Figure 1
Causes and therapeutic approaches for development delays of mentally challenged children - conceptual framework

Genetic Conditions
- Down Syndrome
- Fragile X Syndrome
- Prader-Willi Syndrome
- Phenylketonuria

Prenatal Problems
- Congenital Infections
- Prolonged fever in the first trimester
- Exposure to alcohol and anticonvulsants

Perinatal Problems
- Late Pregnancy
- Birth asphyxia
- Low birth weight
- Placental dysfunction

Postnatal Problems
- Brain infection
- Head injury
- Chronic lead exposure
- Malnutrition

Other Factors
- Dysfunctional family ties
- Parental psycho pathology
- Poverty
- Parenting styles

Causes for MCC

Delayed Milestones

Mentally Challenged Children
- MR, CP
- Autism
- ADHD
- Mild
- Moderate
- Severe
- Profound

Family Management Problems

Early Intervention
- Special Education
- Physiotherapy
- Occupational
- Speech and Communication Therapy
- Medical Intervention
- Augmentative

Yoga Therapy

Imagination in development of mentally challenged children and family life management

4
Mental retardation is a particular state of functioning that begins in childhood and is characterized by decreased intelligence and adaptive skills and also is the most common developmental disorder (Bregman, 1991). Mentally challenged children may suffer from one or multiple impairments that interfere with cognitive function. These impairments can be biological or psychological in nature and can manifest as mental retardation, developmental delays, mental illness and learning disabilities. The term developmental disability covers a broad spectrum of conditions, which includes Mental Retardation, Cerebral Palsy, Autism and ADHD (Grossman, 1983; Moudgil, Kumar & Sharma, 1985; Holmes & Hassanein, 1988; McCarthy & Betz, 2000; Torfs Van den Berg, Oechsli & Cummins, 1990; Batshaw, 1991; Gillam, 1992; Pati & Parimanik, 1996; Wehmeyer, Martin & Sands, 1998; Kumar, Singh & Akhtar, 2009). Failure to achieve developmental milestones is suggestive of mental retardation. These limitations will cause a child to learn and develop more slowly than a typical child (Polit & Beck, 2004).

The cause of mental retardation among children is unknown for most of the cases. A number of environmental, genetic or multiple factors can cause mental retardation. It is also believed that behavioral or societal factors such as poverty, malnutrition, maternal drug and alcohol use, as well as severe stimulus deprivation can contribute to MR (McLaren & Bryson, 1987; Schaefer & Bodensteiner, 1992; Cury et al., 1997; Campbell, Morgan & Jackson, 2004).

Persons with developmental disabilities are slow in gaining motor skills, self-care and daily living skills, cognitive, social as compared with typical peers. Children with mental retardation are slower in gaining skills, the more severe the retardation, the more noticeable the lack of proper development of skills (Hurlock, 1967; Grossman, 1983; Batshaw, 1991; Erhardt & Rhoda, 1993; Kurtz, 1993; Wehmeyer, Martin, & Sands, 1998).

Mentally challenged children are more likely to exhibit behavior problems than are children without disabilities. Difficulties accepting criticism, limited self-control, and bizarre and inappropriate behaviors such as aggression or self-injury are often observed in children with mental retardation. Some of the genetic syndromes associated with mental retardation tend to include abnormal behavior (e.g., children
with Prader-Willi syndrome often engage in self-injurious or obsessive-compulsive behavior). In general, severe the retardation, higher the incidence of behavior problems (Borthwick-Duffy & Eyman, 1990; Kurtz, 1993; Rush & Frances, 2000). Learning will take them longer, require more repetition, and skills may need to be adapted to their learning level. Nevertheless, virtually every child is able to learn, develop and become a participating member of the community (Daily, Ardinger & Holmes, 2000).

The presence of a mentally retarded child irrevocably changes the family unit and affects all individual members in many areas – family relationship, finances, household functions, social and recreational life, care giving demand and siblings (Marsh, 1992). According to Read (2000), dealing with service provider is identified as the most stressful part of bringing up a disabled child. Parents consider behavioral problems of their children to be an extra burden and experience difficulty in raising and managing such mentally challenged children (Maes, 2003). Aman (1999), stated that behavior and emotional problems of children with mental retardation is considerably higher than among typically developing children.

According to Marsh (1992), there is much evidence that family members experience a range of powerful emotions in response to diagnosis of mental retardation, including denial, shock, anger, grief, guilt, embarrassment, depression, withdrawal, ambivalence, disillusionment, and fear. Alper, Schloss and Schloss, (1994) note that parents do not accept a diagnosis and continue shopping for a new diagnosis or cure. They may also minimize the seriousness of the disability as they develop coping mechanisms. Parents may experience regret about some of the things they think they should not have done. They feel helpless and unable to change the disabling condition, and this helplessness often develops into either anger or pity. The White Paper for Social Welfare (1997), states that the financial, social and emotional resources of families are also taxed when they have to care for members who have special needs and problems.
Marsh (1992) indicated that as a consequence of a mentally challenged child, families have a number of central needs:

- a comprehensive system of care for their relative
- information about the disability, intervention and services and resources
- skills to cope with the mental retardation and its sequelae for the family support
- meaningful involvement in intervention of the child
- managing the process of individual and familial adaptation
- contact with other families for assistance in handling problems within the larger society

When a child has a disability, family problems increase, which the child can sense. Demands for energy, time and financial resources add a heavy burden of stress. Emotionally, the greatest risk to which most mentally retarded children are exposed is the loss or lack of adequate relationship with an adult caregiver. This loss or lack has profound implications (Bowlby, 1988).

Medical science has progressed so much that many disabilities could be diagnosed before or immediately after birth. Neonates who have had a difficult birthing can be resuscitated, but not always to prevent brain damage, or correct brain damage that has occurred during or after birth. Such babies who are at high risk can be carefully monitored and helped as early as possible. The term used to describe these infants is developmentally delayed especially when it is not possible to ascertain the exact nature of their disabilities or to predict as whether what is seen as disability will worsen as the child grows or it will be outgrown.

The term for the early therapy provided to the child who is considered “at risk” is “early intervention”. The early intervention is used to cover physiotherapy, occupational therapy, speech therapy and special education help. Playground and pre-school experience are also considered as forms of early intervention.
Early intervention programs are a means to intervene the developmental behavior of the child. It helps to -

- detect handicap
- prevent occurrence of secondary handicap
- produce behavior changes and to encourage learning of new skills
- reduce the cost of later treatment or education and to
- give advice and assistance to parents

These programs help the infant to develop optimally and help the parents to understand their child’s developmental problems, strengths and limitations. It offers a curriculum of multi-sensory stimulation aimed at improving cognitive, physical and emotional development. The early multi-sensory experiences form the basis for subsequent learning and development. Parents and other family members also get much needed support through individual or group counseling (Baloueff & Olga, 1993).

The high rate of co-existing problems in children with developmental deficits has important implications with regard to treatment, and calls for multidisciplinary competence and multi-modal intervention strategies (Mandich, Polatajko, Macnab & Miller, 2001; Hadders-Algra, 2002; Missiuna Rivard & Bartlett 2003; Stormont, Espinosa, Knipping & McCathren, 2003; Gillberg et al., 2004; Bloomgarden, 2004; Van Staveren & Dale, 2004; Wilson, 2005). In order to decide when, how and which resources should be invested, different types of intervention programs – special education, physiotherapy, occupational therapy, speech & communication therapy, augmentative therapies need to be further developed, implemented and evaluated (Sugden & Wright, 1998; Larkin & Parker, 2002; Wilson, 2005; Miller et al., 2008).

Among these intervention programs, augmentative therapy is found to be more useful as it is proved to help the mentally challenged children a great deal in leading a normal life. Many types of augmentative therapies are provided in the special schools along with special education for children with developmental disabilities. Music therapy, dance and movement therapy, art therapy, play therapy,
yoga therapy and augmentative communication are some of the augmentative therapies used. In India too, some augmentative therapies are in use along with special education programs.

Among the various therapies used for treatment, yoga therapy is a complementary mind-body movement therapy. Yoga for children is a relaxation technique that has been found to reduce stress and tension, dissipate excess energy, relieve tiredness, lengthen attention span, improve physical health, sharpen concentration, enhance mental clarity, and cultivate better interpersonal relationships (Seiler & Renshaw, 1978; Telles, Narendran, Raghuraj, Nagarathna, 1997; Peck, Kehle, Bray & Theodore, 2005).

In the context of developmental disabilities, yoga has been used with very encouraging results. Yoga begins by working with the body on a structural level, helping to align the vertebrae, increase flexibility and strengthen muscles and tendons. At the same time internal organs are toned and rejuvenated, the epidermal, digestive, lymphatic, cardiovascular and pulmonary system are purified of toxins and waste matter. The nervous and endocrine system are balanced and toned and the brain cells are nourished and stimulated. The end result is increased mental clarity, emotional stability and a greater sense of overall wellbeing. As yoga works on at so many different levels, it has great potential as an effective therapy for chronic diseases and conditions that do not respond well to conventional treatment methods. Children with Down syndrome who practice yoga impress the teachers and parents with their quick mastery of basic motor, communication and cognitive skills (Sumar, 2007).

In studies conducted by Krishnamachari Yoga Mandram and Vijay Human Services, mentally challenged children have shown significant improvement in motor skills and posture, reduction of obesity, disappearance of facial tics, reduction in hyperactivity, improved sleep and appetite. There have been subjective accounts and documented reports (Krishnamacharya Yoga Mandiram, 1983) on the efficacy of yoga therapy in the mentally retarded. Yogasanas have been modified to help the children gain control over his / her body and mind, to encourage co-ordination of
breathing with the movement of asanas. Long drawn out sounds have been used with wonderful results (Desikachar & Jeyachandran, 1983).

Yoga is useful in combating learning disorders, ADHD and mental retardation (Bhavanani, Madanmohan & Udupa, 2003). Yoga therapy is fast advancing as an effective therapeutic tool in many physical, psychological and psychosomatic disorders (Linden, 1973; Vahia, Doongaji & Jeste, 1973; Digambarji Swami, 1975; Goyeche, 1979; Nagarathna & Nagendra, 1983; Nagendra, 1984a, b; Nagarathna & Nagendra, 1985; Kuvalayananda Swami, 1993). Telles & Naveen (1997) has proved that the use of yoga for rehabilitation has diverse applications. Yoga practice has benefited mentally handicapped subjects by improving their mental ability and also the motor co-ordination and social skills.

1.3. NEED FOR THE STUDY

Raising a child who is mentally challenged require emotional strength and flexibility. The child has special needs in addition to the regular needs of an ordinary, and parents can find themselves overwhelmed by various medical, care giving and educational responsibilities. These children demand a remarkable capacity for patience, compassion, kindness, and understanding. Whether the special needs of the child are minimal or complex, the parents are inevitably affected. Support from family, friends, the community or paid caregivers are crucial in maintaining balance at home. Kazak and Marvin, (1984) pointed that higher levels of stress are found in the families with handicapped children and that despite the presence of high levels of stress, the families were found to have successful coping strategies. Friedrich, Wiltturner and Cohen, (1985) commented that coping resources like ‘utilitarian resources’, ‘energy/moral’, ‘general and specific beliefs’, and above all ‘social support from the near and dear ones’ were the important sources to overcome the continuous stress of those parents with severely retarded children.

Many therapies have been researched for improving the quality of life of these children. Medical treatment stands a necessity to lead a normal day. In addition, parents seek various interventions to help their special children to improve
and enjoy their life skills. Although many therapeutic methods are found, Yoga has been highly beneficial. It is proved that these practices make them joyful and happy, make them jubilant, improve their quality of life and gives them a sense of well being, apart from the other benefits. Yoga is found to help mentally challenged children to alleviate their behavior problems and increase concentration that requires no stimulant drugs and has no known side effects (Brown, 2003).

Yoga is the process of using physical exercises and mental imagery that originated in the Indian cultures more than three thousand years ago. It is a practice that helps to create a union between the mind, body, and spirit (Khalsa, 2001). Yoga works on many different levels and has great potential as an effective therapy for chronic diseases. Children with disabilities who practice the breathing and postures of yoga often show remarkable benefits (Sumar, 1998).

Although the research interest in the field of yoga for mentally challenged children has gained importance in India, there is lack of sufficient literature on the effect of yoga, on the overall developmental problems of mentally challenged children and its impact on family life management. Thus, it was consciously felt that yoga would have positive effect on the mentally challenged children in their life skills and greatly help the parents in rearing the child. Therefore, an attempt has been made to study the “effect of yoga on the developmental problems among mentally challenged children and its impact on family life management”.

1.4. SIGNIFICANCE OF THE STUDY

The children who are being researched in this study are persons with developmental disabilities that encompass many diagnostic categories and include Mental Retardation, Cerebral palsy, Autism, ADHD and specific learning disabilities of various degree of severity. This study also extends itself to parents and teachers of these children who would necessarily be involved in administering this therapy regularly.

This study is significant in that it uses ancient techniques in the management of developmental problems of mentally challenged children. From the perspective of
yoga therapy, every individual is an integrated person, a combination of the physical, emotional, intellectual and spiritual aspects of the being. The technique incorporated in yoga therapy helps to integrate all aspects of the person into a harmonious whole. Yoga involves no ingesting of medicines and so non-toxic. It is augmentative or complementary in nature.

1.5. OBJECTIVES OF THE STUDY

The objectives of the study were:

1. To elicit the background information of the mentally challenged children

2. To understand the physical, cognitive, speech and communication and behavioral problems of mentally challenged children

3. To find out the problems faced by the parents of mentally challenged children in family life management

4. To identify the best and simple yogasanas that suits the selected mentally challenged children

5. To analyze whether training in yoga helps to reduce the physical, cognitive, speech and communication problems faced by the mentally challenged children

6. To study whether training in yoga helps to reduce the behavioral problems of mentally challenged children

7. To increase the independent functioning of the mentally challenged children through yoga therapy and analyze its impact on family life management