REVIEW OF RELATED LITERATURE

A review of previous works is very essential for any type of investigation which is related to the topic. It helps to determine the objectives of the study and selecting the methodology and to analyze data with proofs. Here, some previous works already done by others have been reviewed by the investigator, which have distinct relation with the present study.

Ahmad, Dr. Nadeem, Joshi, Dr. H.S., Bano, Dr. Rubeena & Phalke, Prof. D.B. (2010) studied “Study of health status and etiological factors of mentally challenged children in a school for mentally challenged in rural Maharashtra”\(^1\) and concluded that majority of mentally challenged children (68.0%) were in 5-9 years age group. Most of them had moderate retardation (43.0%). Down’s synddome (17.23%) was commonest, followed by Fragile syndrome (6.89%). In 70.68% children no clinical syndrome was associated with mental retardation. 60.35% children were offspring of consanguineous marriages. In 63.8% children the causes for mental were idiopathic, and genetic causes were found in 29.31% children.

Rahman Azibur (2002) studied about “Mental retardation in the North-East: Causative factors, problems, incident and prevention.”\(^2\) The major findings of the study were-

i) The majority of mental retardation 52% cases were prenatal causes of mental retardation of children that included Genetic and Chromosomal abnormalities; mental shock and tension of expectant mother. Neo-natal causes of mental retardation are 22% that comprised: asphyxia and pre-matured birth and other remaining 26% of the cases are due post natal causes comprised infections disease, accident, deprivation of breast milk and brain disorder. The higher incidence of mental retardation used to take place during pre-natal period.

ii) The study indicated that mentally retarded children have behavioral problems, habit disorders and physical problem. They are also poor in adjustment. Most of them are hyperactive (81.48%) and have eating problem (91.30%) and have behavioral problems (77.78%). Some of them are aggressive and self injurious.

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\(^1\) Internet Journal of Medical Update Volume-5 (2), pp 21-25.  
http://www.askpublication.com/ijmu

\(^2\) All India Association for Educational Research Volume-14, page- 1-5
Daily Donna K., Ardinger Holly H., & Holmes Grace E. (2000) studied on “Identification and evaluation of mental retardation”<sup>1</sup> and results that disease like whooping cough, measles, or meningitis can cause mental disability if medical care is delayed or inadequate. Exposure to poisons like lead or mercury may also affect mental ability.

Davis Sharon (1997) stated that the causes of mental retardation are categorized as:

**Genetic condition:** These result from abnormality of genes inherited from parents, errors when genes combine or from other disorders of the genes caused during pregnancy by infections, overexposure or X-rays and other factors. Inborn errors of metabolism which may produce mental retardation, such as PKU, fall in this category. Chromosomal abnormalities have likewise been related to some forms of mental retardation, such as Down syndrome and fragile X syndrome.

**Problems during pregnancy:** Use of alcohol or drugs by the pregnant mother can cause mental retardation. Malnutrition, rubella, glandular disorders and diabetes, cytomegalovirus and many other illnesses of the mother during pregnancy may result in a child being born with mental retardation. Physical malformations of the brain and HIV infection originating in prenatal life may also result in mental retardation.

**Problems at birth:** Although any birth condition of unusual stress may injure the infant’s brain, prematurity and low birth weights predict serious problems more often than any other conditions.

**Problems after birth:** Childhood diseases such as whooping cough, chicken pox, measles and HIV disease, which may lead to meningitis and encephalitis, can damage the brain, as can accidents such as blow over the head or near drowning. Substances such as lead and mercury can cause irreparable damage to the brain and nervous system.

**Poverty and cultural deprivation:** Children in poor families may become mentally retarded because of malnutrition, disease-producing conditions, inadequate medical care and environmental health hazards. Also, children in disadvantaged areas may be deprived of many common cultural and day-to-day experiences provided to other youngsters.<sup>2</sup>

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<sup>2</sup> The Arc’s Human Genome Education Project 1997, USA
Gaitan E. & Dunn J.T. (1992) – “Epidemiology of iodine deficiency” ¹ studied and concluded that lack of adequate availability of iodine from the mother restricts the growth of the brain of the fetus, and leads to a condition called hypothyroidism. More common than full-fledged cretinism, as retardation caused by severe iodine deficiency is called, is mild impairment of intelligence.

Wo Bell, (1995), “Pediatric Trauma: Initial Care of the Injured Child.”² Studied and results that head injury is a major cause of death and disability in the pediatric population and TV tip over is an important cause of head injury in children.

Namboodiri VMD (2005)³ mentions that there are mainly two causes of mental retardation are: 1. Biological causes that includes-
   i) Prenatal factors such as Genetic and Chromosomal aberration, Prematurity, Congenital anomalies, Material infections, Intoxications and teratogens during pregnancy and Complications of pregnancy.
   ii) Perinatal factors such as Birth injury and Kernicterus.
   iii) Postnatal factors such as Infections, Cerebral Palsy, Trauma and Intoxications.
2. Psycho-social factors of mental retardation that include Poverty and Malnutrition and Familial mental retardation.

Grover, Ms Usha (2000) - “A study of the effect of training programme for sibling on Academic Achievement of Children with mental retardation.”⁴ at Ph.D. level studied and got concluded that there is significant effect of sibling training programme on total academic achievement of children with mental retardation, and also significant effect of sibling training programme on sibling’s understanding of various aspect of mental retardation. The study also found that there is significant difference in achievement level of children with mental retardation having male siblings and children with mental retardation having female sibling.

Hasan Karal, KokoQ Mehmet and Ayyildiz Ugur (2010) studied “Educational computer games for developing psychomotor ability in children with mild mental impairment.”⁵ The study used a case type research model and the participants were two educable mentally disable children, a teacher and a physiotherapist. The teacher and physiotherapist emphasized that the game can contribute to psychomotor development in

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¹ Trends in endocrinology and metabolism, Volume.3 (5) page-170-175.
³ Elsevier India Private Limited, New Delhi, pp. 212-226.
⁵ Procedia Social and Behavioral Science Volume-9 Page 996-1000.
http://www.mendeley.com/research/educational-computer-games-developing-psychomotor-..
educable mentally disabled children. In conclusion it can be said that the game used is a suitable for special education in terms of design and interaction.

Pruthi Gauri (2007) have analyzed in her Article “Language development in children with mental retardation.” It revealed that the overall picture of early language development in children with retardation provides strong evidence for differences and similarities as well as various delays in comparison to normal children. Different forms of retarded children follow the same set of universal principles in acquisition of word meaning (not true for severely and profoundly retarded children). There are broad similarities in kinds of phonological errors made by these children and those in normally developing children suggesting the universal aspects of articulation process. The retarded children also acquire syntactic and morphological knowledge in the same order as the normally developing children (in the early stages). Children with intellectual disabilities do acquire basic pragmatic language skill, more subtle aspects of conversational competence is less commonly displayed.

Kumari Shantna, Mishra SN, Chaudhury S, Singh Amool R, Verma AN & Kumari Sangeeta (2009) made a study on “An experience of community mental health program in rural areas of Jharkhand”, to assess the prevalence and pattern of mental disability. It is found that the prevalence of mental disability was found higher among male (67.9%) than among females (32.1%). The prevalence rate was higher among the productive groups and among individuals with low socio-economic status.

Croen Lisa A., Grether Jutish K., & Selvin Steve (2001) studied “The Epidemiology of Mental Retardation of unknown Cause”. The objective of this study was to describe selected infant and maternal characteristics for children with mild and severe mental retardation of unknown cause. The results of the study was that for both children with mild and severe mental retarded, risk was increased among males, low birth weight children, and children born to women of black race, older age at delivery, and lower level of education. Increased risk for mild mental retarded was found for multiple births, second or later-born children, and children whose mothers were born outside of California. Increased risk for severe mental retarded was observed among children born

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3 http://www.pediatrics.org/cgi/content/full/107/6/e86
to Hispanic mothers; children born to Asian mothers also had increased risk for severe mental retardation but decreased risk for mild mental retardation.

Rao (1994) conducted “A study of Behavior disorders in moderately mentally retarded children and the relation to parental attitude.” The sample comprised of parents of 60 moderately mentally retarded boys and girls. The findings of the study indicated that the parents have a negative attitude towards their children with mental retardation.

Kumar Indrabhushan, Singh Amal R. And Akhtar S. (2009) studied “Social development of children with mental retardation” and results was that with increasing severity of mental retardation, the level of social development also decreases and age does not have any effect on social development. The findings are also that among children with mental retardation, the cognitive and social skills are interrelated.

Upadhyay Shambhu & Singh Anju (2009) studied “Psychological problems and needs of parents in caring mentally retarded children: The impact of level of mental retardation of children”. The result of the study shows that the level of psycho-social problems faced by the parents of mentally retarded children increases with the level of mental retardation of the child. Therefore, parents of moderately related children registered more problems, in all aspects, compared with parents having mildly retarded children. The parents of both retarded children expressed fulfillment of different needs. The mildly retarded parents’ needs were more of preventive and adjustment nature where as parents of moderately children were more concerned with life long adjustment and financial security, including government help, of their children.

Persha Amarjyothi, Arya Saroj, Nagar R.K., Behera P., Verma R.K. & Kishore M.T. (2007) studied “Biological and Psychosocial Predictors of developmental delay in persons with intellectual disability: Retrospective case-field study.” The aim of the study was to identify the biological and psychosocial factors associated with developmental delay resulting in intellectual disability. The results indicated that maternal age at conception; foetal presentation; neonatal seizures and infections were the best indicators of developmental delay characteristic of intellectual disability. Psychosocial variables such as emotional trauma during pregnancy, economic status and education of parents had no significant impact on development.

2 Industrial Psychiatry Journal Volume. 18 Page 56-59.
3 Indian Journal of social Science Researches Volume. 6 No. 1 Page 103-112
4 Asia Pacific Disability Rehabilitation Journal Volume 18 Page 93-100
Thuppal M. and Narayan J. (1990) studied “A study of persons with severe mental retardation and multiple disabilities.” ¹ The findings of the study were that the major presenting complaints were in the area of self help, language, epilepsy, motor problems and behavior problems. Infection in brain, birth anoxia and trauma were major aetiological categories in addition to a large number forming unknown category.

Majumder Mita, Pereira Yvonne da Silva & Fernandes John (2005) studied “Stress and anxiety in parents of mentally retarded children.” ² The findings of the study were that the level of parental education and family income had an impact on the perceived stress and anxiety manifested by parents of mentally retarded children in equally parents of profound to moderately mentally retarded children and in parents of mild to borderline mentally retarded children.

Sekhon S.S & Sekhon M.K. (2007) in their book “Education of Exceptional Children” ³ describe that the general characteristics of mentally retarded children are limited intelligence, social insufficiency, slow reaction, absence of clarity, inability to decide, lack of concentration, inability to learn fast, inability to understand quickly, little control over impulses, inability to remember, short tempered, lack of co-ordination, poor sense of judgment, lack of complex sentiments, personality traits, organismic inferiority, and delay in development.

Winnepenningcx Birgitta, Rooms Liesbeth and Kooy R. Frank (2003) have analyzed their article “Mental Retardation: A review of the genetic causes.” ⁴ It mentioned that the causes of the impairment are extremely heterogeneous and although a cause for mental retardation has been diagnosed in only half of the cases, it has been estimated that half of all cases are due to environmental factors and half to genetic factors. Environmental factors include prenatal exposure of the foetus to toxic substance (e.g., alcohol, drugs), environmental contaminants, radiation, infection, malnutrition, illness of the mother (e.g. exposure to rubella, cytomegalovirus) etc. Multiple problems during or after birth may cause mental retardation. Although any unusual stress during birth may cause brain damage, especially premature birth and low birth weight may predict mental retardation. During childhood, factors such as disease (e.g. measles), a blow on the head, environmental toxins, etc. may cause irreparable damage to the brain and the nervous

¹ Indian Journal of Psychiatry Volume 32 Page 334-340
² Indian Journal of Psychiatry Volume 47 Page 144-147
³ Kalyani Publishers, Ludhiana, Delhi, Page 81-82
⁴ The British Journal of Developmental Disabilities Volume 49 No 96 Page 29-44
system. Genetic factors include chromosome abnormalities, monogenetic disorders and polygenic factors.

Phadke Shubha R., Pandey Amrit, Puri Ratna Dua, Puri & Patil S.J. (2010) studied “Genetic Counseling: the impact of Indian Milieu.”¹ The results of the study that most of the families were referred for the diagnosis and the treatment of the disorder in the proband. The consultants understood the medical facts about risk of recurrence and were satisfied with genetic counseling. They also found that there was no change in reproductive plan after genetic counseling in most of the cases.

Moser H.G. (1995) “A Role for gene therapy in mental retardation”² studied and concluded that gene therapy will most likely benefit only those people have single-gene disorders, such as Lesch-Nyhan disease, Gaucher disease and Phenylketonuria (PKU) that cause serve mental retardation.

Deave T., Heron. J, Evans J, et al. (2008) studied “The impact of maternal depression in pregnancy on early child development”³ and concluded that maternal depression during pregnancy and postpartum has been shown to be associated with developmental delay in children at 18ths of age. After further adjustment for postnatal depression, the effect sizes were slightly attenuated.

Patel Sangram Kishor (2009) studied about “An emperical study of causes of disability in India”⁴ at Ph.D. level. The results revealed that locomotor disability is the most prevalent type of disability affecting the population of all ages in India. Mental problems are highest among working age population, and visual and hearing disability are highest among the aged population. The study also reveals that mental disability is occurring mainly due to serious illness during childhood, head injury in childhood and pregnancy and birth related causes. Old age, cataract, glaucoma and other eye disease are not the main causes for having visual problems while polio, injury other than burns, other illness, stroke, arthritis, cerebral palsy are the main causes of locomotors disability. The study also shows that injury other than burns is a vital cause of having disability in India.

¹ The Indian Journal of Pediatrics, Volume 71 Page 1079-1082
² Mental Retardation and Developmental Disabilities research Reviews: Gene Therapy, Volume 1 Page 4-6
³ BJOG Volume 115 (8) Page 1043-1051
⁴ The Internet Journal of epidemiology Volume 6 No- 2
Sangita A.J. & Joshi M.S. (2000) studied “Impact of parental education on attitude towards nutrition and health of their mentally retarded children.”¹ The findings of the study were an association between educational level and attitude of parents towards health of the mentally retarded children. Fifty-four percent mentally retarded children were from semi-urban, sixty-six retarded children from urban and ten percent mentally retarded children from rural area were found out in the study.

Gathwala G. and Gupta S. (2004) studied on “Family burden in mentally handicapped children” and concluded that Sixty percent of families were severely burdened in relation to the item “Effect on the physical health of other family members”² and concluded that physical/ psychological illness and members of the family becoming depressed and weepy. Forty-five percent of families felt severely burdened regarding family interaction and had almost ceased to interact with friends and neighbors. Forty percent had family leisure severely affected and they had stopped normal reaction and had frequently abandoned planned leisure with the affected child using up most of their holiday and spare time. Thirty-five percent of cases had their family routine severely affected, leading to neglect of rest of the family. Only twenty-five percent of families felt were severely burdened financially. Twenty percent had postponed planned activity due to financial constraints.

Ravindranandan Vidya & Raju S. (2007) studied “Adjustment and Attitude of parents of children with Mental Retardation”³ and concluded that parental religion, income, and education do not have any significant influence on adjustment variables, but there is change in parental attitude among different religious groups. Locality of parents influences only on the dimensions of social adjustment and parental attitude.

Chandorkar Hemant & Chakraboty (2000) studied “Psychological Morbidity of Parents of mentally Retarded Children”⁴ and the results of the study conclusively proved that the parents of mentally retarded children had a higher prevalence of psychological morbidity than the parents of normal children.

¹ NCERT Indian Educational Abstracts Volume 6 No-2 July-2006
² Indian Journal of Community Medicine Volume 29 No 4 page 188-189
³ Journal of the Indian Academy of Applied Psychology, Volume 33 No. 1 Page 137-141
⁴ Indian Journal of Psychiatry, Volume 42 (3), Page 271-274