

# **Compilation of Indian Research Abstracts in Disability Studies**



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## **Foreword**

The Census 2011 data has revealed that the prevalence of disabilities in our country has increased from 2.13 per cent to 2.21 per cent since 2001 Census. In absolute numbers there is an increase of over 49 lacs persons with disabilities in our country in a decade. Disability studies focuses on the issues of persons with disabilities and their inclusion in the society and it cuts across various disciplines. The approach of Disability Studies is inter-disciplinary. Disability Studies is an upcoming discipline in our country, however, Disability Rehabilitation and Special Education fields are in existence since 1960s in India. It gives me immense pleasure to mention here that due to the pioneering efforts of IGNOU, we were able to set up the National Centre for Disability Studies on our campus. Currently more than 6,000 students with disabilities are on the rolls of IGNOU.

After the amendment in the Rehabilitation Council of India (RCI) Act in the year 2000, RCI was charged with the responsibility of promoting research in the field of Disability Rehabilitation and Special Education. However, not much has been done in this direction. Very few researches in this field have been conducted in our country. Most of these research studies have been conducted by the National Institutes for different types of disabilities under the Ministry of Social Justice and Empowerment, Government of India and some premier institutes set up by Ministry of Health & Family Welfare, Government of India. A few universities in the country offering Masters and research programmes in Special Education and Disability Rehabilitation have also been involved in research activities.

Despite the efforts of many Govt. and private institutions, number of researches being conducted in the country is very less. Quality of research also needs to be improved. This is due to lack of research grants and infrastructural facilities available in our

country. The researchers, professionals, academicians and other stakeholders have to depend on the researches conducted in foreign countries which may not be always relevant in the Indian context. Therefore, there is a need to rigorously promote researches in the field of Disability Studies in our country.

Whatever small number of researches that have been conducted in our country in the field of Disability Studies and allied fields like Disability Rehabilitation and Special Education have not been compiled and published in a systematic manner, depriving the researchers and other stakeholders of this rich resource. No such attempt has been made across various disabilities.

I congratulate the National Centre for Disability Studies for taking up this assignment of compiling Indian research abstracts for different disabilities and I am sure the users of this document will be definitely benefitted.

**Professor Nageshwar Rao**  
**Vice-Chancellor (In-Charge)**

## **Preface**

The National Centre for Disability Studies (NCDS) has been established by IGNOU inter alia with the objective to collate, compile, document and publish material on Disability Studies and allied fields such as Disability Rehabilitation, Special Education and so on. Since there is dearth of researches in Disability Studies globally, the situation is far from satisfactory in India. This was also felt by the experts of the field in a Consultative Meet held on 8<sup>th</sup> October 2013 at IGNOU who strongly recommended that a compilation and documentation of Indian research abstracts in Disability Studies across all disabilities is required.

In a short span of little over a year and without incurring any expenditure on collecting the research abstracts, hundreds of researches have been gathered from various sources like Rehabilitation Council of India, MEDLINE, Shodhganga, websites of various Universities and other such sources. The compilation includes only those researches which have been conducted in India since 2000 and it also includes Ph.D. and post Doctoral researches but not Masters and M.Phil level researches. Most of the researches have been published in peer reviewed reputed Indian and foreign research journals. Pure Medical researches have been avoided in this document.

One of the objectives behind the publication of this document is to provide a ready reckoner to all the stakeholders of disability sectors like researchers, professionals, academicians, parents and family members of persons with disabilities, persons with disabilities, policy makers, activists etc. This would be particularly helpful to the students who are pursuing higher education and research programmes in Disability Studies and allied fields. Another advantage of this document is that it has research abstracts across all disabilities which have been chapterized separately for

each disability including cross disability abstracts. Complete references with the title of the researches have been given for locating the full researches. The document would also be available on IGNOU website and it would also be updated from time to time.

I wish to complement my colleague Dr. Siddhant Kamal Mishra for coordinating this project efficiently and successfully.

**Dr. Sanjay Kant Prasad**  
**Director (I/c)**  
**NCDS**

# Chapter 1

## AUTISM



## **Augmentative and Alternative Communication (AAC) within the Developmental Perspective– An Early Intervention Program for Children with Autism Spectrum Disorders**

Karant Pratihya, Chandhok Tanushree Saxena (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

### **Abstract**

Augmentative and Alternative Communication (AAC) programs were developed for those with difficulty in communicating through the verbal mode. Much of the impetus for AAC systems originally stemmed from the communication needs of individuals with cerebral palsy with a mismatch between the innate communication capabilities and actual expression because of the motor difficulties. AAC systems are now used for clinical populations other than CP. While training children with ASD, adequate attention is not paid to the developmental milestones and the communication intent of the growing child. The AAC program described here is based on the communicative needs with reference to communicative intent rather than modality of young children with a diagnosis of ASD, enabling the child to express communicative intents that are expressed by his typically growing peers. A range of alternate modalities are tapped in the process, depending on the developmental profile of the child across several domains – motor, verbal, cognitive. This paper presents the same through illustrations of three children, who had a confirmed diagnosis of being within the Autism spectrum, and who began AAC intervention when they were largely non-verbal.

## **Discrete Trial Teaching and Development of Pre-Learning Skills in Intellectually Impaired Children with Autism**

Lal Rubina and Lobo Shiantes (2007). Journal of Rehabilitation Council of India, 3 (1 & 2).

### **Abstract**

The purpose of this experimental research was to determine the effect of discrete Trial teaching on the development of pre-learning skills in autistic children with mental retardation. A sample of 20 children from Mumbai was randomly selected for the study. Subjects were randomly assigned to experimental and control group and tested on pre-learning skills prior to intervention. Discrete Trial Teaching method was used to train the experimental group on pre-learning skills. Intervention consisted of 15 individual sessions of 30 minutes each. At the end of the intervention period, the children in both experimental and control groups were post tested. The findings suggest that discrete Trial Teaching has a positive effect on development of pre-learning skills. Children in the experimental group showed significant improvement in pre-learning skills from pre to post test.

## **Autism Disorder (AD): An Updated Review for Pediatric Dentists**

Udhay J, Varadharaja M.M, Parthiban J and Srinivasan I. (2014). Journal of Clinical and Diagnostic Research, 8(2), 275-279.

### **Abstract**

Over the past two decades, there has been an explosion of interest in Autism Disorder (AD). Knowledge and awareness on the condition has grown exponentially at all levels among the general

public, parents, health professionals, the research community and more recently, at parliamentary level. The world has begun to recognize the scope of this problem and act internationally and locally to improve the lives of the growing number of individuals and families affected by this devastating disorder. This article reviews the dental literature since 1969 and it summarizes characteristics of patients with AD, oral health status and dental management of patients with AD.

## **Perspectives of play behaviour in children with autism**

Lourdu, Mary (2013). Ph.D. Thesis. Bharathidasan University, Tiruchirappalli.

Guide : Maria Kamalam

### **Abstract**

Autism is a developmental disability with a triad of impairments. Play is a platform for all types of development. The children with autism exhibit hampered play development when compared to the normal children. Hence the researcher has undertaken a descriptive study on the perspectives of play behaviour in children with autism. It is a study with a sample of 200 children with autism undergoing training in the Special Schools/Intervention Centres in Tiruchirappalli District. The results showed that the age of diagnosis and the degree of autism had an impact in their overall play behaviour. The parents and special teachers need to be oriented to identify the impairment early so as to enhance better rehabilitation and services which will make them independent in the society. Regular training and workshops need to be organized for Parents and Special Educators to update their information and motivate them to be more committed to strengthen play behaviour among the children with autism.

## **Effectiveness of homoeopathic therapeutics in the management of childhood autism disorder.**

Barvalia P.M., Oza P.M et.al (2014). Indian Journal of Research in Homeopathy, 8 (3), 147-159.

### **Abstract:**

Childhood autism is severe and a serious disorder. A study was conducted by Spandan holistic institute of applied Homoeopathy, Mumbai, with the objective of demonstrating the usefulness of homeopathic management in autism.

**Materials and Methods:** Sixty autistic children of both sexes,  $\leq 12$  years were selected for this study. It was nonrandomized, self-controlled, pre and post-intervention study, wherein the initial 6 months of observation period was used as the control period and the same patients were thereafter treated for 1 year and compared with post-intervention findings.

**Results:** The study demonstrated significant improvement of autistic features with mean change in ATEC score (ATEC<sub>1</sub> -pre-treatment with ATEC<sub>5</sub> -post-treatment) was 15.12 and ATEC mean percent change was 19.03. Statistically significant changes in ATEC scores were observed in all the quarters analyzed through repeated measures ANOVA, with  $F$ -value 135.952,  $P = 0.0001$ . An impact was observed on all core autistic features, which included communication, 12.61%, socialization, 17%, sensory awareness, 18.82%, and health and behavior, 29% ( $P = 0.0001$ ). Significant improvement was observed in behavior by Autistic Hyperactivity Scale, AHS<sub>1</sub> 36 to AHS<sub>5</sub> 14.30 with  $F$ -value 210.599 ( $P = 0.0001$ ). Outcome assessment was carried out using MANOVA, which showed statistically significant changes in post-treatment scores,  $P < 0.005$ . Total 88.34% cases showed improvement, 8.33% showed status quo, and 3.33% cases worsened. Nine out of 60 cases showed a reversal of CARS

putting them into non-autistic zone,  $P = 0.0001$ . A sharp decrease (34%) in ATEC scores, in the first quarter implied positive effect of homoeopathic medicines, prescribed, as per the homoeopathic principles.

**Conclusion:** The study has demonstrated usefulness of homoeopathic treatment in management of neuropsychological dysfunction in childhood autism disorder, which is reflected in significant reduction of hyperactivity, behavioral dysfunction, sensory impairment as well as communication difficulty. This was demonstrated well in psychosocial adaptation of autistic children.

### **Effectiveness of audiovisual modeling on the behavioral change toward oral and dental care in children with autism.**

Sallam A.M., Bad S.B.Y and Rashed M.A (2013). Indian Journal of Dentistry, 4(4), 184–190.

#### **Abstract**

##### **Background/aim**

The purpose of this study was to evaluate the effectiveness of audiovisual modeling on behavioral change of Autistic children toward oral and dental care.

#### **Method**

This prospective study was performed on 36 autistic children aged from 6 to 12 years old attending The “Egyptian Autistic Society (EAS).” Children participated in tooth brushing intervention program. They were randomly divided in to 3 different groups according to modeling methods of tooth brushing. Children in the first group were subjected to demonstration of

tooth brushing steps using model representing upper and lower jaws, children in the second group were subjected to specific colored pictures explaining tooth brushing steps (pictorial Activity schedule (PAS)) and children in the third group were subjected to video modeling (Peer model brushing his teeth). Behavior of the children toward tooth brushing before and after running the program and the dental health knowledge and attitudes of parents toward dental care were assessed using a special questionnaire completed by parents and teachers of the children. Final evaluation was done after one month.

### Results

The result of the study showed that: no statistically significant change in behavior of the children after the program in group A there was a statistically significant change in behavior of the children after program in Group B (PAS model) and Group C (video model).

### Conclusion

Visual pedagogy and Technology-based intervention is useful tool for helping Autistic children to improve their oral hygiene.

## **Assessment of severity of autism using the Indian scale for assessment of autism.**

Chakraborty S, Thomas P, Bhatia T, Nimgaonkar VL, Deshpande SN (2015). Indian Journal of Psychological Medicine, 37( 2), 169-174

### **Abstract**

Background: The Indian Scale for Assessment of Autism (ISAA) was developed to assess the severity of autism among Indian cases. Aims: The present study evaluated the ISAA in relation to

the Childhood Autism Rating Scale (CARS) and the Developmental Disability- Children Global Assessment Scale (DD-CGAS). Materials and Methods: Indian children with ICD 10 diagnoses of Autistic disorder (AD,  $n = 50$ ), Intellectual Disability (ID,  $n = 50$ ), Attention Deficit Hyperactivity Disorder (ADHD,  $n = 26$ ), other psychiatric disorders (PD-N=25) and control children without psychiatric disorders ( $n = 65$ ) were evaluated using the ISAA, DD-CGAS and the CARS (total  $n = 216$ ). Statistical Analyses: In addition to descriptive statistics and correlation, analysis of variance (ANOVA) was used to assess whether the ISAA scores were significantly different across diagnostic groups. Results: Total ISAA scores were significantly higher among children diagnosed with autistic disorder compared to four other diagnostic groups. Total ISAA scores were significantly correlated with CARS scores and DD-CGAS scores. Groups sub-divided on the basis of recommended ISAA cutoff points of severity showed significant differences in CARS scores. Conclusion: The ISAA can thus be used to assess severity of AD among Indian children.



## Chapter 2

# CROSS DISABILITY



## **Developmental Programming for Infants and Young Children: A Clinical Overview on its Applicability in India**

Singh Vinay Kumar, Singh Geeta, Jahan Masroor, Nizamie Alka (2012). Journal of Rehabilitation Council of India, 8 (1 & 2).

### **Abstract**

Developmental programming for infants and Young Children-Early Intervention Developmental Profile (DPIYC-EIDP) is an infant assessment-based programming instrument which claims to indicate a normal sequential development intended to plan comprehensive developmental programmes for all types of developmentally delayed children functioning below 36 months of age level. An attempt was made to assess the normally developing 31 infants and young children from 2-31 months aged to make a profile of their developmental status in different age ranges. The findings of the study revealed that profiles of the development among children on different sub-scales vary inconsistently. The numbers of items in the sub-scales were arranged improperly in various age groupings. Around 50% of the children were found to be functioning at average level whereas the rest 50% were either at above or below average level. Some of the items were not grouped properly as per the age norms whereas some items were not found best suited in Indian conditions. Insignificant inter correlations were observed among various profile areas of the scale. Therefore it is suggestive of standardization of the scale along with revision and modification of its items in the corresponding age-groups as per Indian conditions.

## **Nature of Psychological Distress and Work Motivation in Special Education Teachers**

Bhaumik Mousumi and Mishra Amitav (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

### **Abstract**

Special education teachers undergo the most challenging career those manage the training and habilitation of students with intellectual disability. Despite teachers' input, results are often not visible because of lack of work motivation and stress of teachers. Therefore teacher work motivation and teacher stress has undoubtedly become an area of major concern in special education. Randomly selected, 120 special education teachers participated in a study and were assessed on Work Motivation Questionnaire and Psychological Stress Scale and also compared with 40 teachers of regular schools on the variables of the aforesaid tools. The results indicated that special education teachers those working with students having intellectual disability suffer with significantly low work motivation and presence of significant psychological distress. When compared with regular school teachers, the special education teachers distinctly differed having motivational problem of very poor self identity and psychological distress of inadequacy.

## **Organizations Working for Persons with Disabilities in India Moving Towards Accessible Websites**

Mathew Martin P.J. (2009) Journal of Rehabilitation Council of India, Volume 5, (1-2)

### **Abstract**

A study was undertaken on 3<sup>rd</sup> December 2009, to analyze the qualities of a website designed by Government Organizations (GOs) and Non- Government Organizations (NGOs) working for PWDs in terms of information and Dissemination, Accessibility, Design and Interactive participatory features. Websites are today the face of an organization, with Global reach. The Information and Technology Act (2000) of India, is entirely silent on the subject of web accessibility. However the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) guidelines of 2007, which have been ratified by Govt. of India, of which Article 9.2 (g) & (h) especially lays down that, states should facilitate access for Persons with Disabilities (PWDs) to new information and communication technologies, especially the Internet. The main contribution of this study is to illuminate the features of Websites used by GOs and NGOs working for PWDs in India and its accessibility.

### **Training for Transformation – Experiences in Conducting Participatory Training**

Crishna Brinda (2009). Journal of Rehabilitation Council of India, 5 (1-2).

### **Abstract**

Those of us involved in social development are familiar with the term ‘participation’ or ‘participatory’. We use it all the time – participatory assessment, participatory project management, participatory monitoring and evaluation and, of course, participatory training. It is the last that concerns us and is the subject of this article. Training is a starting point in learning about participatory processes. It sets a foundation for understanding concepts and complexities, and how these translate

into realities within our working spheres in developing and changing societies. To illustrate the essence of participatory training, the words 'interactive learning' and 'participatory training' will be used interchangeably to mean using methods, tools and strategies in training sessions for adults, which are transparent and include the experience of the participants throughout.

There are two sides to any interactive learning programme: the concepts and ideas being imparted and shared, and the methods being used to do this. Both are critically linked, and the success of the training depends on the balance maintained between the two. The main aim of any training programme needs to be not only increased knowledge and skills, but also a change in attitude, an enhanced feeling of worth within those participating. Valaenderen (2001), stresses that there is a dialectical relationship between empowerment and participation.

This article would like to critically examine some of the ground realities of interactive learning sessions being run in developing countries, sessions which are meant to change attitudes, share new ideas about development and are said to be run using participatory methods. It will present a model for conducting training and share examples from experiences gained over the last two decades of working with adults from developing countries.

## **Qualities of Special Teachers**

Lulla B.P (2005). Journal of Rehabilitation Council of India, 1 (2).

### **Abstract**

For the last few decades, an attempt has been made to train teachers for the mentally retarded children in India. The efforts of the National Institute for the Mentally Handicapped (NIMH),

Secunderabad are praise worthy as it guides and controls as many as sixty centres offering Diploma in Special Education (MR). Very few universities have taken up the work of training special teachers either at undergraduate or at graduate level. The number of special teachers produced through the available facilities in India is far below the actual requirements of the country wherein about 3,00,00,000 (3%) of population is mentally retarded. This paper is an attempt to highlight the qualities of special teachers.

## **Special Education Policy for Primary Education**

Dubey Shakuntla (2005). Journal of Rehabilitation Council of India. 1 ( 2).

### **Abstract**

The Special education is first and foremost individualized education which needs support of technically trained professionals, enlightened and committed parents/caretakers and community at large. Otherwise commercialization of education may lead to labeling slow learner as mentally retarded. The readiness to learn is an important concept in teaching-learning process. Slow learning due to sensory, motor, neurological deficit or other causes in the child needs early evaluation and intervention. Not early labeling and segregation which promotes maladjustment and lifelong dependence on community resources. Special education input needs trained teachers' empathetic understanding of special needs of a disabled child in terms of strength and weaknesses as well as resources in the school system for making appropriate technology accessible accordingly for short term and long term measures of intervention provide only restoration and rehabilitation. This will need not only professional help, money, technology but also micro and macro level of

systemic planning in education by our government in order to provide right of education to every child.

## **Persons with Disabilities and Human Rights: A Case Study of a Village Panchayat in Andhra Pradesh**

Rao Bogani Rama (2005). Journal of Rehabilitation Council of India, 1 (1).

### **Abstract**

This article is an attempt to examine the current situation of persons with disabilities in Andhra Pradesh (AP) and to sensitize the disabled persons, their family, government officials, political leaders and community at large that the disabled also have same rights as any other normal human being. Disability has been defined as “A loss of reduction in physical, anatomical or psychological function is ‘Impairment’. When such a loss interferes with social, economic or educational activity, it becomes a ‘Disability’. But if society has prejudice against the impaired person it becomes a ‘Handicap’.” (Goyal H.C.). The question is, what are human rights and do the disabled have any legal rights like normal human beings.

Human rights are entitlements due to every man, woman and child because they are human. They include rights pertaining to the security of the persons, including the right not to be deprived of liberty without due process of law, the right not to be tortured and not to be held in slavery or servitude. Their violation can never be justified, even by a state during a national emergency. Human rights also include civil and political rights, economic, social and cultural rights to which everyone is entitled (Wiseberg Laurie S.; 1996: XIX). Persons with disabilities do have these rights. In fact, this is recognized by the United Nations on 9<sup>th</sup>

December, 1975 and the General Assembly adopted the declaration on the rights of disabled persons (resolution 3447[xxx]) and also recommended that all member states should bear these principles in mind in establishing their national policies, plans and programmes (Lawson Edward, 1996: p. 364).

## **Social Stereotypes and Attitudes Towards Disability**

Mishra Siddhant K. (2005). Journal of Rehabilitation Council of India, 1 (2).

### **Abstract**

The article is an attempt to present the common attitudes and stereotypes towards disability and persons with disabilities held by the society since ancient period. Low self concept, self esteem and aspiration level of persons with disabilities has contributed to their isolation from the mainstream. Attitude towards disabled people have been predominantly negative in direction and the intensity of beliefs and behaviours appears to vary according to not only factors such as culture but also impairment. Studies have shown that stereotypes and negative attitudes towards disability exist not only among general population but also amongst the health professionals. Unfortunately parents also possess lack of understanding about the condition of the child and they tend to associate the disability in their child with their failure, leading to anxiety and frustration. Media, cinema, plays, novels, etc., have often depicted the persons with disabilities as beggars, comic, wicked and villainous characters. The ancient Indian literature does not speak very high about the disabled except certain mythological characters. Lately, significant shift in the attitudes have been noticed with growing awareness about the potentials and achievements of persons with disabilities. Beliefs and values play significant role in shaping our attitudes, prejudices and stereotypes and gradually the societal attitude

towards the persons with disabilities is changing for the better: Karma theory is past now.

### **Status and Expectations of Trained Human Resources in the Field of Special Education in India: An Exploratory Study by RCI.**

Singh J.P. (2005). Journal of Rehabilitation Council of India, 1(2).

#### **Abstract**

The Rehabilitation Council of India mooted the idea of communicating to the registered professionals and personnel on certain important issues of the disability sector. This study was conducted in the year 2003 in a very limited way to gauge the minds of the professionals about their experience and expectation so that some steps could be taken in future to address certain pertinent issues and to fill the gap in the disability area. These issues were raised in the form of a short questionnaire, included questions on quantity and variety of experience of professionals, manner of service delivery, area of service delivery, possible areas where professionals would contribute to Rehabilitation Council of India's activities, etc. The responses from 996 professional/personnel, received through questionnaire and the data was analyzed on various issues.

### **Disability and Healthcare Infrastructure in the North East: The Profile of Assam**

Bhushan Braj and Goswami Sangeeta (2005). Journal of Rehabilitation Council of India, 1 (1).

### **Abstract**

The present nature of problems pertaining to social and mass cause needs a re-look. The revamping of health care infrastructure and modules of sensitization on health and disability issues is a challenge before us. With little modification in the existing system certain social cause can be given due care. We propose the use of user-friendly communication technology in so doing, especially in geographically delineated areas.

### **Development of Quality of Life Scale for Person with Disability – ‘QUALIS-PWD’**

Mishra Amitav (2005). Journal of Rehabilitation Council of India, 1 (1 ).

### **Abstract**

The current article describes the development of a scale for measuring quality of life of persons with disabilities and thereby obtaining reliable and valid data for intervention and evaluation purpose. A scale was developed containing 60 items covering various dimensions such as: quality home and community living; health and wellness; rehabilitation and education; employment, income and maintenance; social recreational and cultural; and personal. While administering the scale, each quality of life item was to be assessed over four domains, such as, support access, participation and satisfaction. The scale was standardized on a population with all categories of disabilities. A high degree of reliability co-efficient was obtained by ‘rational equivalence’ and ‘inter-rater’ method. The quality of life measurement is highly innovative and can be directed to programme needs rather than simply comparing individuals with others.

## **Community Based Rehabilitation: A Model Programme at Kulgaon-Badlapur**

Banik Arun, Dunbale T.S and Dayalan K. (2005). Journal of Rehabilitation Council of India, 1 (1).

### **Abstract**

Rehabilitation of disabled population in our country is a challenging task especially in rural communities. The Ali Yavar Jung National Institute for the Hearing Handicapped, working under the Ministry of Social Justice & Empowerment, Govt. of India, has started a Community Based Rehabilitation services in association with Kulgaon-Badlapur Nagar Parishad in Thane District (Maharashtra). The aim of the project is to provide the necessary rehabilitation services and support to the persons with disabilities.

The principle objective of CBR is to provide rehabilitation services to the disabled persons and their families who cannot reach rehabilitation centre on their own. The concept of CBR has emerged essentially in the context of universalizing of rehabilitation services, as per the declaration of Alm-Ata in 1978. This sought to integrate rehabilitation with primary health care with a view to provide rehabilitation services to the disabled people at their doorsteps. Accordingly, the WHO (1978) developed the concept of CBR and decided to take positive steps in developing rehabilitation services at the community level throughout the world.

Present paper provides the information on Community Based Rehabilitation – a model programme carried out in association with Kulgaon-Badlapur Nagar Parishad, which has received National Award in 2002 from the Hon'ble President of India for creating barrier free environment for the persons with disabilities.

## **A Study for Quality Improvement of B.Ed. (SE-DE) Programme**

Singh J.P., Prasad S.K. and Sharma Madhvi (2005). Journal of Rehabilitation Council of India, 1 (1).

### **Abstract**

Developing professional for the Special Education within a broad perception of education in the 21<sup>st</sup> Century, Memorandum of Understanding was signed with Madhya Pradesh Bhoj (Open) University, Bhopal on January 30, 2000 with an objective to make joint effort in promoting and implementing special educational programmes for the empowerment of special target group of learners with disabilities.

As a result, B.Ed. (SE-DE) programme through distance mode was launched in 2000-01 through 44 study centres all over the country in disability areas of Mental Retardation, Hearing Impairment, Visual Impairment, Locomotor Impairment and Cerebral Palsy.

A questionnaire consisting 15 items related to the programme was framed. The type of the questions were objective as well as short descriptive. Questionnaires were sent to 960 candidates who admitted for B.Ed. (SE-DE) programme of the session 2000-01. The total participants belong to the four areas of disabilities.

The questionnaires were sent to 960 candidates of first session of the programme and 283 responded out of that.

The overall analysis of the responses received from the students concluded that B.Ed. (SE-DE) course is providing a standard level of academic satisfaction. In other terms, we can say that the students getting maximum academic input from the course and the course has maximum academic face value. Regarding information provided by the course, it is very informative and

knowledgeable and having enough content related to technological advancement in the field of disability. Besides these, it is providing maximum input in non-disability area. The course has been accepted very widely and the induction programme is the maximum demand of the course. The study material is exhaustive and comprehensive.

## **Evaluation of Functioning of Select District Disability Rehabilitation Centres**

Rao Govinda L. and Sivakumar T.C. (2005). Journal of Rehabilitation Council of India, 1 (1).

### **Abstract**

Evaluation of functioning of Select District Disability Rehabilitation Centres covering 24 districts reveals that a 4-phase model, viz., Proactive, Interactive, Active and Reactive was effective in the implementation of the Project. A 4V Evaluation Model has been used to ascertain the value added. 521 training programmes were conducted covering 29,051 anganwadi workers for identification of persons with disabilities. Out of a total number of 1,00,601 persons with disabilities identified, 22,437 were given aids and appliances with a total number of 189,948 follow-up beneficiaries involving 25 varieties of services. Expenditure incurred per individual on establishment is Rs. 201.00 and under ADIP Scheme it is Rs. 1775.24. The feedback study indicates the usefulness of the aids and appliances for the persons with disabilities using assistive devices as very positive. The analysis of strength, weakness, opportunity and threat (SWOT analysis) provided the guidelines for improving the efficacies.

## **The Six Minute Walk Test as a Tool to Evaluate Functional Progress in Persons with Respiratory Disability**

Prasad S.K. and Sharma Divya M. (2014). Journal of Physiotherapy and Occupational Therapy, 7 (2).

### **Abstract**

Chronic obstructive pulmonary disease is a widely prevalent disorder and the most common cause for respiratory impairments and disability. It is expected to rise at the fifth position as a cause of disability adjusted life year by the year 2020. Patients of COPD suffer from chronic breathlessness which limits their activities and functional capacity. The Six minute walk test is a valid and simple tool to evaluate the functional limitation and monitor progress. The aim of our study was to assess the functional progress in COPD patients undergoing a six week exercise program using the 6 MWT as a tool. 45 subjects with a history of smoking and a diagnosis of stable COPD were made to undergo a six weeks exercise program and the 6 MWT was performed before and after six weeks. The variables evaluated were the walk distance and dyspnoea ratings. There was a statistically significant increment in both the parameters after six weeks. The mean increment for walk distance was 31 meters and the dyspnoea rating improved by 0.5 and 0.7 for the baseline and completion values. These increments over a short period are positive indicators of clinical progress and signify potential scope for enhancement in the functional capacity of these eternally breathless patients.

## **Culture and Disability: Indian Perspective**

Prasad S.K. and Aslam Benish (2013). Social Research Journal, Past Present and Future, VI (1), 13-17

## **Abstract**

India is a vast country with diverse social and cultural bases and flavours. Every aspects of life including contextual phenomenon are somehow or other affected and influenced by these differences. Disability is also a very important contextual area, which is greatly influenced by these cultural and social diversities in terms of its perceptions, reactions by the respective society and ultimately rehabilitation and mainstreaming of persons with disabilities. Therefore, it is difficult to think in terms of a unified single strategy for overall growth and development of persons with disabilities.

The broad objective of this article is to focus on the various social and cultural issues which influences the rehabilitation in general and education of persons/children with disability in particular in India.

The cultural factors, which affect the rehabilitation and mainstreaming of persons with disabilities includes psychological, social and economic. The Psychological factor, such as perception of disability, belief in Karma philosophy and attitude towards disability affect the development and growth of the persons with disabilities. The social factors include family, gender and social exclusion.

The article concludes that family as a unit of culture can play a vital role in rehabilitation and mainstreaming of persons with disabilities, so that they could get proper place in their social life and become a productive citizen of India.

## **A Study on the Competency of the Mainstream Teachers towards Inclusion of Children with Disabilities in Regular Schools**

Verma Rajesh Kr. (2012). Journal of Rehabilitation Council of India, 8 (1 & 2).

## **Abstract**

The Aim of the study was to assess the knowledge of mainstream teachers towards inclusive education of children with disabilities. A total number of 500 mainstream school teachers from government, government-aided and private schools through purposive sampling were selected. Identification and demographic information about mainstream school teachers were obtained by using specially designed data sheet. Knowledge assessment tool had been developed by the author was used to find out the competency of the mainstream teachers towards inclusive education of children with disabilities in regular schools. Descriptive statistics like t-test, Pearson's correlation (r) and ANOVA with post hoc analysis (LSD) were used. Results indicated that most of the teachers (76%) having good knowledge about the disabilities and their management in the regular school in which female mainstream teachers were more in number. Teachers attended several programmes on inclusive education, enabled them to improve their knowledge on general information of disabilities, causes and their management in the regular schools. Study also indicated that high qualification and experience leads to good knowledge and competency in dealing the children with disabilities in regular schools. Whereas, the income of the mainstream school teachers have less important role in gaining the knowledge of the teachers towards inclusive education of children with disabilities. Urban mainstream teachers have more knowledge and competency as compare to rural mainstream teacher in dealing children with disabilities in inclusive education.

Further it could be concluded that, need based orientation and training programme should be provided to strengthen the teachers in terms of knowledge about disabilities and inclusive education to facilitate healthy interactions and relationships among teachers and the children with disabilities. It is also suggested that more focus to be given on the rural mainstream school teachers in imparting the knowledge about disabilities towards inclusive education.

## **Application of Accessibility Statements on Indian Webpages: A Review**

Rout Nachiketa (2012). Journal of Rehabilitation Council of India, 8(1 & 2).

### **Abstract**

The extent to which the Indian webpage's applied accessibility statement prescribed by the Directorate of Standardization Testing and Quality Certification (STQC) have been surveyed. Thirty three national websites were evaluated for 20 accessibility features prescribed as accessibility statement by the Directorate of STQC and another five accessibility features prescribed WCAG guidelines. The average score obtained was ten. Top scorers were the Ministry of Road and Transport (22), National Institute of Open Schooling (19), and National Institute for Empowerment of Persons with Multiple Disabilities (17). Bottom scorers were Sarva Shiksha Abhiyan, Super star Rajnikant's Website and Trumala Tirupati (4). Significantly ( $p < 0.05$ ) implemented features were titles, headings and sub-headings. Most features were significantly absent (12) or were used intermittently (13). Accessibility statements which enable merging the digital divide are yet to be appreciated in India.

## **A Study on the Attitude of the Mainstream Teachers towards Inclusive Education of Children with Special Needs in West Bengal**

Verma Rajesh Kr. (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

### **Abstract**

The aim of the study was to assess the attitude of mainstream teachers towards inclusive education of children with special

needs in West Bengal. A total number of 500 mainstream school teachers from different districts of West Bengal were selected for this study from government, government-aided and private schools through purposive sampling. Identification and demographic information about mainstream school teachers were obtained by using specially designed data sheet. Attitude assessment tool had been developed by the author was used to find out the attitude of the mainstream teachers towards inclusive education of children with special needs. Descriptive statistics like t-test, Pearson's correlation (r) and ANOVA with post-hoc analysis (LSD) were used. The study indicated that female teachers were having more positive attitude towards inclusive education of children with special needs as compared to the male teachers. Teachers attended several programmes on inclusive education which enables them to improve or change the attitude on policy towards inclusive education. Whereas, the income of the mainstream school teachers were having less important role in changing the attitude of the teachers towards inclusive education of children with special needs. Further it could be concluded that, need based orientation and training programme should be provided to strengthen the teachers in terms of knowledge about disabilities and inclusive education to facilitate healthy interactions and relationships among teachers and the children with special needs. It is also suggested that more focus to be given on the rural mainstream school teachers in imparting the knowledge about disabilities towards inclusive education in West Bengal.

### **ICT for Inclusive Education for Persons with Disabilities**

Hemlata (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

## **Abstract**

Recent years have witnessed a global shift in the perception and treatment of persons with disabilities towards a human rights perspective. This perspective view people with disabilities as not only subjects in the development process, but also partners and owners of the development process and its production. About 18% of people worldwide live with some kind of disability, including those related to aging; 10% - more than 600 million people – live with life-altering disabilities, two-thirds of which are in developing countries. These demographic circumstances present considerable challenges on the one hand, and enormous opportunities on the other, for the increasingly important role of Information and Communication Technology. While new ICTs can worsen the exclusion experienced by disabled persons in terms of their access to information and full participation to society, they can also provide extraordinary assistive solutions to empower them. New, proven technologies can enhance the lives of people with disabilities and support their rights as citizens and participants in their communities' social and economic activities – but only if these solutions are affordable. Sharing of information is the key to success in any developing country and we should also follow the same path. The use of ICT in disability sector is essential in reducing the handicapping effects of specific disabilities. This paper will reflect the impact of the use of ICT for inclusion. To facilitate persons with disabilities we need to provide them cost effective technologies which can improve their lives and make them productive member of society.

## **Emotional Intelligence and Occupational Stress of Special Education Teachers: Implications for Teacher Preparation and Professional Development**

Poornima R and Reddy Lokanadha G. (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

### **Abstract**

The investigators in this study explored the emotional intelligence and occupational stress of teachers working in the schools for mentally retarded children in Chennai city of Tamil Nadu State. The emotional intelligence and occupational stress of teachers were assessed using the Five Point Rating Scales developed for the purpose. The results revealed that around 85 percent of the teachers encompass only low and moderate levels of emotional intelligence and around 90 percent of special education teachers experience moderate and high level of occupational stress due to various stressors. Further the correlational analysis revealed the presence of significant negative relationship between emotional intelligence and occupational stress. Stepwise multiple regression analysis exemplify that the emotional intelligence dimensions have emerged as significant predictors of occupational stress to special education teachers working in the schools for mentally retarded children. The study provides clear-cut scope and need to organize in service training programmes in developing emotional intelligence in teachers and redesigning the curriculum for special education teachers training programmes by integrating the components of emotional intelligence. Also, there is a need to strengthen the organizational structure and climate of the special education schools meant for mentally retarded, provide opportunities for professional enhancement in the form of participation in professional meetings and seminars, create situations for healthy professional interactions and make the work

environment more flexible to work. This will go a long way in preparing teachers to perform their challenging roles more effectively thereby cope up with the stressors.

## **Scope of Management Research in Disability Rehabilitation**

Kumar Narendra and Sivakumar T.C. (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

### **Abstract**

Management studies primarily attempt to answer questions of how to manage a given organization and focus on managerial practices rather than on particular organizations. Management research is mainly concerned with the efficiency and effectiveness of organizations.

This study tries to review the existing research in the area of disability rehabilitation specifically focused on management practices and principles. The review tries to highlight the existence of management oriented disability rehabilitation research at international level and also in Indian context.

The finding suggests that amongst the bulk of disability rehabilitation research not many studies tries to explore the practices and principles related to management. Few unpublished research work in India gives the glimpse of management oriented research in disability rehabilitation.

## **Mainstreaming the Disabled: A Strategy for J&K State**

Gupta Renu and Bindra R. (2006). Journal of Rehabilitation Council of India, 2 (1-2).

### **Abstract**

The present paper is an attempt to focus attention on mainstreaming as an effective strategy to empower the disabled children of school going age of either sex in the State of J&K. The paper discusses the current scenario with regards to disability in J&K State. The authors strongly advocate the need and relative advantages of mainstreaming in the context of its limited practice and possible pitfalls based upon an exhaustive survey of research studies. Finally, strategies have been identified to ensure success of mainstreaming at the school level in J&K State.

### **Organizational Effectiveness of Disability Rehabilitation Organizations: Perception of Professionals and Managers**

Narendra Kumar and & T.C. Siva Kumar (2008). Journal of Rehabilitation Council of India, 4 (1 & 2 ).

### **Abstract**

Organizational effectiveness has been commonly defined as the extent to which an organization accomplishes its goals or mission. To achieve these goals, some critical organizational components needs to be given due consideration. Much research had been conducted to identify these organizational effectiveness components by considering the nature and scope of the organizations. In this study the efforts has been made to study the perception of disability rehabilitation professionals and/or managers about four important components of organizational effectiveness, i.e., Strategy & Leadership, Trust & Motivation, Capabilities & Ownership and Operational Effectiveness. The data was collected by using a five point rating scale developed by Metrus Group. The mean analysis of 50 responses reveals that the Disability Rehabilitation professionals/managers

associated with NGOs perceives their organizational effectiveness higher than the professionals associated with the corporate sector. This study also indicates that the representatives from international disability rehabilitation organizations feels their organizations are more effective in above domains than the local and national level rehabilitation organizations.

### **Sensitivity of the Re/Habilitation Professionals about the Appropriate Use of the Term ‘Normal’**

Huddar Asmita (2008). Journal of Rehabilitation Council of India, 4 (1 & 2).

#### **Abstract**

Use of labels during professional communication needs to be taken seriously not only because appropriate labels reflect updated knowledge and indicate desirable attitude but also because these send correct message to the others. One of the most commonly used label/term in the field of re/habilitation is ‘normal’. It is noticed that the label ‘normal’ is undesirably used to mean ‘non-impaired’. The aim of this study is to find out how sensitive the re/habilitation professionals are while using the label ‘normal’. Re/habilitation professionals (special educators with degree, special educators with diploma and audiologists) were requested to identify and select one error for correction out of the planted five errors in a given leaflet. Result shows that labeling error is the least selected error indicating lowest sensitivity towards the use of the term ‘normal’. Secondly, the sensitivity of the three types of professionals did not differ significantly. One can conclude that there is a scope for improvement in the re/habilitation field as far as the use of academic labels/terms is concerned. Since the lingua franca used by the professionals has far-reaching impact, heavily loaded terms like ‘normal’ is recommended to be used carefully.

## **Role of Social Workers in Community Based Rehabilitation (CBR) Services for the Disabled in India**

Batra Sushma and Agnimitra Neera (2008). Journal of Rehabilitation Council of India, 4 (1 & 2).

### **Abstract**

In this article an attempt has been made to holistically understand the concept of Community Based Rehabilitation (CBR) in the context of a developing country like India. It also strives to elaborate upon the basic features of CBR as evolved by the World Health Organization. It also sheds light on the process of implementation of CBR in the Indian context, and presents a critique of the same. Based on an examination of these components, the authors have made a case, thereby highlighting the need for involvement of professional social workers in the successful implementation of the CBR programme using Community organization and methods of Social Work. The participation of the community is vital since the programme involves the disabled, their families and community of which they are an integral part. The emerging global scenario has seen a spurge in opportunities for the disabled worldwide out of which one of the important initiatives has been Community Based Rehabilitation (CBR) services for the disabled. The services have not only enabled in reaching out of various services to the disabled at the grass roots level, but also empowered them in the process. Rehabilitation of the disabled requires the professionals from all quarters, i.e., doctors, psychiatrists, physiotherapists, speech therapists, occupational therapists and social workers. Although the inputs from all the team members are of equal significance, yet, it is the professional social worker who needs to be more actively involved from the inception of rehabilitation services till the disabled themselves along with their family and community

are ready to become active partners in the process of rehabilitation. It is the social worker, who ensures that suitable networking strategies are evolved with all professionals associated with rehabilitation process and also optimal utilization of resources is made use of by the disabled. Professional social workers are considered as instrumental in bringing the desired changes. They draw on an extensive knowledge base in order to meet the challenges of the work. The social worker is a link between various services, rehabilitation professionals and beneficiaries as the profession is concerned with influencing people and achieving desired changes with the help of specialized skills and use of appropriate values.

### **A Comparative Study of Care Appraisal, Subjective Burden and Emotional Reactions among Caregivers and Care Recipients**

Yadav V.N., Surajmal and Sheoran Savita (2008). Journal of Rehabilitation Council of India, 4 (1 & 2).

#### **Abstract**

The authors investigated the perception of exemplary care, subjective burden, problem solving ability and emotional reactions among hearing impaired (HI), orthopedically handicapped (OH), and their caregivers. A total of 100 participants participated in the study voluntarily. Among them 25 HI (age ranging from 50-70 years, recommended by audiologist), 25 OH due to accidents (age ranging from 20-45 years) and 50 were their respective caregivers from 25-40 years of age. These participants were administered exemplary care scale, perception of subjective burden and five items of emotional reactions. The t-analysis was insignificant for perception of problem solving ability. Caregivers reported higher scores on exemplary care, perception of subjective burden and emotional reaction measures. The findings were

discussed in the light of existing literature. The implications, limitations of this study and suggestions for further researches were also discussed.

## **Developmental Delay and Disabilities in High Risk New Born - a Follow up Study**

Sukumaran T.U., Vijesh P.V. and Sukumaran P.S. (2008). Journal of Rehabilitation Council of India, 4 (1 & 2).

### **Abstract**

With medical and technological advancement in intensive neonatal care more and more preterm and at risk babies are born and have chance of surviving. Low birth weight and prematurity are factors that are associated with handicapping conditions later in life and have implication for Rehabilitation Services. Assessment and follow up programmes for high risk new born babies are highly critical in this context. In a developing country like India, few studies are done in this field. In this study, 90 high risk new born babies who attended the out patient department of Institute of Child Health, Kottayam, Kerala State were followed up for one year period. The main tool used for the study was Trivandrum Developmental Screening Test and subjects were assessed at 11, 2, 3, 6, 9, 12 months intervals. The results showed that the prevalence of developmental delay and developmental disabilities were 14.4% and 15.6% respectively. Among different developmental disabilities, the prevalence of cerebral palsy was highest with 6.7%. Low birth weight was found to be a major factor among high risk new born babies. Neonatal asphyxia, prematurity and low birth weights were found to be major causes for developmental delay and disabilities in these high risk babies. Related variables such as age, weight, height, educational level and socio economic status of mothers were found to be non-significant among high risk new born babies with respect to the

developmental of delay and disability. The study also emphasizes the need for early intervention of identified cases of high risk new born babies with developmental delay and disabilities.

### **Poor school performance**

Karande, S. and Kulkarni M. (2005). The Indian Journal of Pediatrics, 72 (11), 961-967.

#### **Abstract**

Education is one of the most important aspects of human resource development. Poor school performance not only results in the child having a low self-esteem, but also causes significant stress to the parents. There are many reasons for children to under perform at school, such as, medical problems, below average intelligence, specific learning disability, attention deficit hyperactivity disorder, emotional problems, poor socio-cultural home environment, psychiatric disorders and even environmental causes. The information provided by the parents, classroom teacher and school counselor about the child's academic difficulties guides the pediatrician to form an initial diagnosis. However, a multidisciplinary evaluation by an ophthalmologist, otolaryngologist, counselor, clinical psychologist, special educator, and child psychiatrist is usually necessary before making the final diagnosis. It is important to find the reason(s) for a child's poor school performance and come up with a treatment plan early so that the child can perform up to full potential.

### **Prevalence of health related disability among community dwelling urban elderly from middle socioeconomic strata in Bangaluru, India**

Srinivasan Krishnamachari, Vaz Mario and Thomas Tinku (2010). Indian Journal of Medical Research, 131 (4), 515-521.

## **Abstract**

**Background and Objectives:** Research has shown that health related conditions and socio-economic factors influence disability in the elderly. We examined the prevalence of health related disability in community dwelling elderly (> or =65 yr) residents in a suburb of Bangaluru, Karnataka, India, and assessed the association of disability with various socio-economic variables and current health status.

**Methods:** Using the International Classification of Functioning, Disability and Health (ICF) disability was measured in 356 elderly in the Koramangala suburb of Bangaluru city. Various socio-economic and health related factors associated with disability were documented.

**Results:** A total of 85 per cent of the respondents reported current medical problems. Based on a total disability score computed from the participation section of the ICF, 27 per cent of the respondents had mild disability while 37 per cent had higher level of disability. Disablement was significantly associated with age > 75 yr and impairment in cognitive and sensory functions especially hearing.

**Interpretation and Conclusion:** In this urban elderly population while majority had current medical conditions, a significant proportion did not experience any difficulties in activities of daily living. Restriction in participation in activities of daily living was more influenced by increasing age and impairment in cognitive functions and not current health status. A multidimensional measure of disability as captured by the ICF needs to be applied to other populations such as urban poor and rural elderly to get a more comprehensive picture of disability among the elderly in India.

## **A Study of Elementary Schools of Delhi, India from an Equity and Access Perspective of Students with Disabilities**

Singh, Renu, (2007). Ph.D. Thesis (Education). Jamia Millia Islamia, New Delhi

Supervisor: Prof. Mohammad Miyan

Co- Supervisor : Prof. Sudesh Mukhopadhyay

This study focused on the efficacy of elementary schools (Private and Government) admitting students with disabilities in New Delhi, India. The key questions, the researcher analyzed, was whether Government and Private Schools in Delhi are adequately prepared to address social and academic needs of students with disabilities. The study was undertaken to study the prevalent policies and practices of the schools from the perspective of key stakeholders- students with disabilities, teachers, principals, parents, siblings and peers.

The study covered one hundred and six students with disabilities enrolled in classes IV-VIII of ten Government and ten Private Schools who were interviewed along with seventy-five teachers, seventy seven parents and caretakers, sixteen siblings and twenty principals. Five interview schedules were developed to get information regarding prevailing attitudes and practices regarding students with disabilities and awareness regarding Government policies as well as their implementation on the ground. In order to gain insight into prevailing social relationships with peers, sociometric technique was utilized in the seventy five classes that the students with disabilities were studying in, for peer feedback from a total of two thousand two hundred and twenty eight students studying in classes IV- VIII. An adapted version of the Psychological Sense of School Membership (Goodenow, 1993a) was translated into Hindi and results analyzed for sense

of belongingness prevalent in the one hundred and six students with disabilities enrolled in the twenty schools. Classroom observations were conducted in seventy five classes, using an observation schedule developed for the study. These observations provided vital information in examining practices prevalent in the sampled schools.

The analysis of data indicates that majority of the students with disabilities did not face stigmatization due to their disability and many of them had positive social relationships, due to positive attitudes prevailing in the schools.

The academic performance of the students presented a challenging trend, with six students in Government and fifteen students in Private Schools repeating their class. This was reflective of the abysmal pedagogical practices in seventeen of the twenty schools chosen for the study, and the complete absence of accommodations for students with disabilities.

Policy implementation of Scheme of Integrated Education for Disabled Children (IEDC) was found to be totally ineffective with only 3.2% of Government School children accessing the scheme. Schools in Delhi were far from being 'inclusive'- at best they seemed to be at the phase of 'integration', where students with disabilities were enrolled but remained on the margins, like many other excluded peers.

Three themes emerge from this study as the basis of providing the roadmap for 'inclusive schools'- creating access through differentiation of tasks, building culture in order to create an enabling environment and supporting practices for responding to student diversity.

In the light of India's commitment to realization of Universalization of Elementary Education, it is vital that the lacunae in the educational system and schools per se be taken into consideration.

This research is only representative of schools in Delhi and therefore the findings cannot be generalized to the situation across the country.

## **A Study of Implementation of Inclusion of Children with Special Needs in Delhi Primary Schools**

Kaur Jasmeet, (2010). Ph.D. Thesis (Education). Jamia Millia Islamia, University, New Delhi.

Supervisor : Prof. Mohammad Miyan

Co-supervisor : Prof. Sudesh Mukhopadhyay

### **Abstract**

Education is a powerful instrument of social change, and often initiates upward movement in the social structure. The trends in the educational provision for the Children with Special Needs have since the past two decades continued to focus on their education as that for their peers without special needs. Inclusion workably implies attending the school that the pupil would have attended in the absence of a significant special need. It implies a radical reform in terms of curriculum, assessment, pedagogy and grouping of pupils. Inclusive education has become one of the major concerns of education policy in every part of world nowadays. Government of India through various schemes and programme has been making special efforts in assuring the enrolment of children and youth with disabilities in the regular school system to the extent possible.

The emphasis is therefore laid on inclusive education that uses the existing infrastructure/institutions and professionals to the extent possible and does not create a plethora of completely new institutions which are expensive and take time to come up. The

objectives of the study were to identify schools with good practices of inclusion and to investigate the perception, attitude of the elementary school principals and teachers towards inclusion of students with disability in the schools, the implementation strategies and practices of inclusion in schools and the role of principals in introducing change in schools. The case study of 20 MCD schools was part of the research work.

The study analyzed data of case study of 20 MCD schools, 49 teachers dealing with 2 CWSN in these schools, 72 observations of Children with special needs and 20 principals of these schools. The tools used for the study were attitude scale, survey, and interview schedule and classroom observations. Data obtained was subjected to appropriate quantitative and qualitative analysis. The findings of this study emphasize the importance of implementing strategies and not 'dumping' students with disabilities into general education classes. Care must be taken in establishing inclusion settings in resistant environments. The primary school principals' perception about children with special needs was, in part related to their attitude towards inclusion. Most of the principals showed favorable attitude towards inclusion. Pre service and in-service training programs for principals need to address inclusion as part of their curriculum.

Professional development opportunities should include opportunities to observe and know more about the children. The principals threw light on non availability of effective infrastructure facilities in schools. The teachers believed in inclusive education. The in-service training programmes conducted for the teachers proved very beneficial. Curriculum requires a flexible, success-oriented means of assessment, examination and evaluation. The government policy focus should be on pedagogy, curriculum and attitudes.

In nut shell this study shows that principal is a key change agent in school, leadership is reflected in perceptions and practices,

implementing inclusion means introducing change into school and finally it is the leadership that promotes the introduction of change in the school. With more confident and skilled teachers the inclusive education programme will be a success in the classrooms also.

## **A Study of Barriers in the Implementation of Inclusive Education at the Elementary level**

Pandey Yogendra (2009). Ph.D. Thesis (Education Jamia Millia Islamia, New Delhi.

Supervisor : Prof. S.R.Mittal

### **Abstract**

The goal of achieving Universalization of Education is incomplete without including children with Special Needs in main education system (Inclusion) and making necessary provisions for their inclusion in it. The World Conference on Education for all, held in Jomtien, Thailand in 1990 placed much emphasis on inclusive education. Inclusion was also a strong feature of Salamanca declaration on Principles, Policies and Practices in Special Needs Education signed by head/representatives of 92 governments including India and 25 International Organizations in June 1994. It stated that: "Those with special educational needs must have access to regular schools which should accommodate them within teaching pedagogy capable of meeting these needs." After independence, the Indian Constitution directed the state to ensure provision of basic education to all children up to the age of 14 years. The education of persons with disabilities was, however, not explicit in the early constitutional provisions except for guaranteeing similar rights for people with disabilities as other members of society.

The Education Commission of 1966 (Kothari Commission) drew attention to the education of children with disabilities. In 1974, for the first time, the necessity of integrated education was explicitly emphasized under the scheme for Integrated Education for Disabled Children (IEDC). In pursuit of the goal of providing basic education for all, the National Policy on Education (1986) and its follow-up actions have been major landmarks. The Rehabilitation Council of India Act 1992 initiated the standardization of training courses for professionals to meet to the needs of students with disabilities. The enactment of the People with Disability Act in 1996 provided legislative support. This Act makes it mandatory to provide free education to children with disabilities in an appropriate environment until the age of 18 years. In 1999, the government of India passed the National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act for the economic rehabilitation of people with these disabilities. These Acts have been instrumental in bringing about a perceptible change/improvement in the attitude of government, NGOs and the community at large towards people with disabilities. In recent years, two major initiatives have been launched by the government for achieving the goals of Universalization of elementary education (UEE): the District Primary Education Programme (DPEP) in 1994 and the Sarva Shiksha Abhiyan (SSA) in 2000. Programmes launched in the recent past have been able to make only a limited impact in terms of increasing the participation of children with disabilities in formal education. If this situation is to be changed; a focused effort is required to identify the barriers in the implementation of policy of inclusive education.

Keeping this in view the present study was designed and carried out to attain the following objectives.

- (i) To review the existing special educational programme.

- (ii) To study the perception of various persons related to special need education.
- (iii) To identify the barriers in the implementation of inclusive education policies.
- (iv) To develop relevant tools to study the barriers in the implementations of inclusive educational programme.
- (v) To suggest measure to promote inclusion.

#### Methodology

For this study, descriptive research method was adopted. The design of the present study was descriptive survey type and mainly based on the data collection through Interview and Observation schedule. The

Population of the present study consisted of Head/Principals and Regular teachers of all school that had children with special needs in Delhi.

Sample strength was being confined to 40 Principals and Regular teachers from the Public (20 schools) and Govt. schools (20 schools) in Delhi. One principal was interviewed from every school and three regular teachers from every school.

The tools were developed by Investigator through literature analysis, discussion with experts, especially with the help of Guide. The interview schedule for Regular teacher and Head/Principals of the school consisted of 18 items and observation schedule was based on three types of facilities like Physical facilities (6 items), Teaching Learning Materials (11items) and Educational aids and Appliances (6 items).

#### Result and Findings

In the present study the data collected were analyzed and used appropriate statistical techniques in the light of the objectives set

forth for the investigation. Responses were converted into percentage for the purpose of analysis. All responses were given by principals, regular teacher of items of interview schedule covered under the various title/statements. Some major findings of this study were drawn as following:

- (i) The majority of the principals of both types of public and govt. schools did not understand or, were not aware of inclusive education. They could not differentiate between inclusion and integration. Hence the concept of inclusion as whole was not clear to the principals. However, principals of public schools were better aware than the principals of Govt. Schools;
- (ii) Majority of principals had partial awareness about the types of children with special educational needs (CWSEN). However, comparatively principals of public schools had somewhat better awareness than principals of Govt. Schools;
- (iii) The majority of principals from both types of Public and Govt. schools faced problems while introducing inclusive education for CWSEN in their schools;
- (iv) The majority of principals of both types of regular schools did not take initiatives to facilitate the education of CWSEN. The results showed that public schools were better than govt. schools in facilitating inclusion of CWSEN;
- (v) The principals of Govt. school had better awareness level than the principals of public school regarding various facilities available to CWSEN from the state. Overall majority of principals were not aware about the various schemes, concession facilities available to CWSEN from the states;

- (vi) Most of the Principals of both types of schools did not accept that it was feasible to educate CWSEN in their regular schools;
- (vii) A large majority of the principals of both public and govt. schools were not aware of the procedure for availing the facilities provided to CWSEN by the states;
- (viii) A large majority of the principal of both types of public and Govt. school were unaware of the resources they could make use for providing supportive services needed by CWSEN for their education in inclusive setup;
- (ix) More than half of the principals of both public and Govt. school accepted that they do not have knowledge and awareness about legal provisions for education of CWSEN;
- (x) More than half of the principals of the regular schools (both type) confirmed that there was no drop out in their schools.
- (xi) More than half (73.5%) of the regular teachers of public and government schools had no concept and definition of Visual-Impairment and blindness.
- (xii) More than half (55%) of the regular teachers both types of school confirmed that they had problems in teaching of Visually Impaired children while teaching.
- (xiii) The result shows that participation of visually impaired children and support of seeing children were not better. They got partial support from sighted peers and also partially participated in activities;
- (xiv) Almost all regular teachers of both types of schools were affirmative about the need for specialist support.
- (xv) 80% of regular teachers of both types of schools were positive towards inclusive education.

- (xvi) The majority (80%) of both types of schools did not have essential physical infrastructure/facilities like Ramps, disabled friendly toilet, sitting and lighting arrangement etc.
- (xvii) The result shows that almost all schools (91.9%) did not have teaching learning materials like Braille papers, Braille books, tactile maps, embossed diagram, large print books etc for use of V.I. Children.
- (xviii) 87.22% govt. Schools and 72.2% public schools did not have educational aids and appliances like Braille duplicators and writers, writing devices etc. Most of schools did not have basic equipments, aids and appliances for children with special educational needs. They did have only computers with text to speech software.

### **A study of information storage and access in digital environment for the people with disabilities in NCR libraries**

Sanaman, Gareema (2014). Ph. D Thesis. University of Delhi, Delhi.

Supervisor : Dr. Shailendra Kumar

#### **Abstract**

The present study aims at analyzing the role of the institutions/ libraries in information storage and access in the digital environment for the people with disabilities in NCR region. The access and use of the electronic resources along with the library and information services and ICT facilities by the people with disabilities in the NCR libraries is studied. The various accommodations for the users, Assistive Technology facilities and the Web services provided by the libraries are also examined

in the study. The provision of training and orientation programmes for the users as well as staff has been analyzed along with the study of the status of the R&D activities in the various institutions for the people with disabilities. The Descriptive survey was done with the help of questionnaires and personal interviews with the experts, teachers and disabled individuals. The findings from the data analysis of the libraries reveal that people with disabilities are 'Dependent' on the electronic resources to fulfill their information needs and requirements in all the libraries. There are sufficient information services and facilities available in the libraries for the people with disabilities. All the libraries serving the blind/vision impaired users have the Internet facility for the users while majority of libraries serving the deaf community and some libraries serving the locomotor impaired users do not have the Internet facility. The libraries have the specialized staff for serving the users with disabilities and there is a provision of training programmes for the library professionals in majority of the libraries. The 'Policy Document' that describes the services for people with disabilities is available in all the libraries. All the libraries serving the locomotor impaired users whereas only few libraries serving the blind/vision impaired and deaf/hearing impaired users are involved in R&D activities in the area of disability. The majority of library professionals in all the libraries rated their 'Digital Infrastructure and Assistive Technology' facilities in 'Good' status but the users' responses in all the libraries are not satisfactory in this context. The majority of libraries do not follow any 'Standards/Guidelines for the people with disabilities' during the development of their website. The findings from the 'User Analysis' reveal that people with disabilities prefer electronic resources over print resources for the academic/research purpose. Among all the electronic resources, Internet is an important resource of information for the users with disabilities. The 'user orientation and training programmes' is the area of major concern for the libraries as majority of users have not ever attended any orientation/training

programme at their or any other institution/library. The users with disabilities are found 'satisfied' with the information services and facilities but they are not 'satisfied' with the assistive software/hardware facilities available for them at their institution/library. The people with disabilities are actively involved in the various ICT services and applications but they face various problems during the 'Web accessibility'. The status of the services in NCR libraries for the deaf/hearing impaired people is not good as compared to the people with blind/vision impairment and people with locomotor disability. The information needs and demands of the people with or without disabilities are same therefore libraries need to adopt modern and sufficient aids/equipments for the development of the library and information services for the users in the digital environment.

## **Rights of person with special abilities under the disabilities Act 1995 a critical analysis**

Kaur, Prithpal (2010). Ph D Thesis. Guru Nanak Dev University, Amritsar.

Supervisor: Rattan Singh

### **Abstract**

There are 600 million persons with disabilities in the world today. Eighty percent of them live in developing countries. A staggering 90 million people in India are disabled. That's almost one in every ten. These figures in the very beginning of this article are not mentioned to create any sympathy for persons with disabilities. The aim of mentioning these figures here is to illustrate that still 600 million persons with disabilities are being prevented from contributing to the world society (whether socially or economically) because of the barrier called disability. However, there has been a shift in international thinking on disability from

largesse-based perspective to rights-based perspective. The world for and of the disabled is changing at a rapid pace and the aspirations as well as expectations of people are also changing as fast. Advances in medical and surgical sciences, breakthroughs in technology, greater understanding of the causes of disability and improved methods of coping with it, increasing consciousness of civil rights and the emergence of people with disabilities displaying skills and knowledge to improve their own lives, are some of the factors which have contributed to the new thinking. It is now recognized that the disabled deserve a dignified status in society on the same terms as the non-disabled. Disabled people are a vast minority group, which has been subjected to direct and indirect discrimination for centuries in most countries of the world, including India. The human rights movement has boldly and categorically shifted the attention of policy-makers from the mere provision of charitable services to vigorously protecting their basic right to dignity and self-respect. In the new scenario, the disabled are viewed as individuals with a wide range of abilities and each one of them willing and capable of utilizing his/her potential and talents.

### **An Exploration into the Realm of Disability and Debilitating Factors a Study of Select Contemporary Works**

Manimegalai D (2010). Ph.D Thesis. Periyar University, Salem.

Supervisor: Dr. R. Kasthuri Bai

#### **Abstract**

The glitter of global growth has added little sparkle to the lives of many disabled persons. Deprivation, discrimination, disadvantage, physical indignity, parental injustice social humiliation and haunting predicaments still dominate the lives

of crosscountry fictional personalities. The study presents a detailed and an intensely disturbing data on the differently challenged characters leaving one with a deep sense of fear, shock and also the hope of adding meaning to the hitherto marginalized lives. Employing the features of historical, mythical, psychological, sociological, moral, philosophical and cultural approaches, Daniel Keyes's *Flowers for Algernon*, Steinbeck's *Of Mice and the Men*, Faulkner's *The Sound and Fury*, Salman Rushdie's *The Moor's Last Sigh*, Melville's *Billy Budd* and Bertolt Brecht's *Mother Courage and her Children* have been analyzed. The study makes a singularly important contribution towards the estimation of the disabled beings. Experts, policy makers and every human being who think of positive responses to reverse the plight of disabled characters across the world may consider the findings of the study.

## **A study of Effectiveness of Remedial Programme for Improving Disability and Achievement in English Method**

Roopawalla Nafisa (2014). Ph. D Thesis. Shri Jagdishprasad Jhabarmal Tibarewala University, Jhunjhunu.

Supervisor: Dr. Gavai Madhavrao

### **Abstract**

Researcher is keen and enthusiastic in learning and understanding the child's behavior of learning and is interested in studying the problems faced by slow learners and their disabilities and what effective measures the researcher can do to solve the problems on learning English. Since the investigator is teaching English subject found out that majority of students learning English are not up to the standard. The main ambition of the researcher is to inspire and promote interest at the level of low-motivated students

and to smooth the progress of college students learning English. These all students need remedial course and many of them are slow learners. The students cannot identify the vocabulary and are weak in writing correct formation of sentences. To put curb for future learners the researcher in her thesis intends discovering the effectiveness of remedial programme and improving the disabilities. The researcher gave precise English phonics and communicated with students and teachers to understand the state of affairs. During the episode the students exercised audio-lingual method, students were taken to English language laboratory, outgoing language, adopted teaching skills: playing games, listening to stories, listening to music and singing songs, can method of teaching English, role play, imaginative and original thinking and conversation. However there are students who have still failed in learning as they have studied in crammed up classrooms. For this reason the students have not grasp the curriculum and student's acquaintance to knowledge are slow and are countless. One of the major reasons these days is the new policy of 'No detention system up to standard eight' and under 'right to education for all' the students studying at the primary level i.e. from standard one to class eight i.e. secondary section. Students are promoted to higher classes on the base of presence, even if they have low grades. Schools than set up a additional English program after regular school hours which we called it as remedial teaching. The consequences showed that remedial program was noticeably effective in supporting students in improving their English abilities. How remedial program worked for the underachieving students is explained in detail by the researcher?

## **Stress, Emotional Maturity and Personality of Parents of Disabled Children**

Mohan T. (2013). Ph. D Thesis, Andhra University, Visakhapatnam.

Supervisor : Dr. M.V.R. Raju

### **Abstract**

The present study was conducted to examine the Stress, Emotional Maturity and Personality of parents of disabled children. The data were collected from 400 samples of parents of the disabled children in the Union Territory of Puducherry. The total sample consisted of 100 parents of Loco motor disabled children, 100 parents of Visual Impaired children, 100 parents of Hearing Impaired children, and 100 parents of Mentally Retarded children were stratified by way of Random Stratified Sampling Technique. To assess the Level of Stress, Stress Questionnaire constructed by Latha Satish (1997), Emotional Maturity, Scale developed by Yashvir Singh and Mahesh Bargava (2005), and Maudsley Personality Inventory developed by H.J. Eysenck (1959) were used for this study. The results indicated that significant differences in Stress were observed among the parents of disabled children with regard to Parental gender, Parental age, Parental qualification, Parental occupation, Annual income of the family, Category of disabled children, and the age of the disabled children. Significant differences were observed in Emotional Maturity among the parents of disabled children in all independent variables except type of family. The results found that significant differences observed in the area of personality among the parents of disabled children with respect to gender, occupation and types of marriage, category of disabled and the age of disabled children.

## **Burden and Correlates of Disability and Functional Impairment in an Urban Community**

Sulania Anika, Khandekar Jyoti and Seetharamiah Nagesh (2015). International Journal of Public Health, 5 (1), 82-85.

### **Abstract**

**Introduction:** The risk of developing chronic diseases and general disability increases with aging, resulting in loss of functioning ability and decrease in performing optimally. Early diagnosis of impairment and disability may improve the quality of life of elderly and enable them to lead a full and productive life. The study is a part of a larger study done in an urban area of Delhi. **Materials and Methods :** Systematic random sampling was used to select a cross-sectional sample of the study subjects >20 years and above. Locomotor, Visual Hearing and Speech were assessed using the guidelines given in gazette of India, extraordinary, part II section. Visual disability was measured by the presenting visual acuity in the field area using Snellens chart using WHO guidelines. **Result and Conclusion:** A total of 120 study subjects out of 1300 screened were in geriatric age group. The overall magnitude of the physical disability was 43.3% among elderly. Visual disability was most common form of disability (60%). Many study subjects were suffering from >1 disability, but treatment was sought only in 50% of disabilities. Treatment seeking for disabilities is an important and neglected issue leading to severe degree of disabilities that would be prevented if taken care of, in due time. A multidimensional approach for prevention is the need of the hour.

## Chapter 3

# **HYPERACTIVE DISORDERS**



## **Role of Social Recognition in the Development of ADHD among Adolescents in India**

Singh Archana and Prasad S.K. (2014). Indian Journal of Psychological Issues, 22 (1 & 2).

### **Abstract**

The role of Social Recognition in the development of ADHD was explored among adolescents in different private schools in Delhi. (Inclusive and Integrated settings). The Social Recognition (how the adolescent feels about others' perceptions about him) was measured in the domains of school, peer, family and peer through a standardized tool on Social Recognition. N=50, which comprised of 25 adolescents diagnosed with ADHD and 25 adolescents not having ADHD. In addition, ADHD T test was administered on both the groups. Anova was administered to find out the correlation between the control group and the experimental group. Results showed that the ADHD T-Test score has high significance to the behaviour/opinion/perception of the respondents in the study. Chi-Square results showed high significance in the dimensions of family and society. It was concluded that since the Social Recognition scores in the dimensions of family & society were high, they have a major influence on adolescents and the development of ADHD.

## **Review of Practices in the Management of Attention Deficit/Hyperactivity Disorder (ADHD)**

Saxena Parul and Schwanz Kerry A. (2008). Journal of Rehabilitation Council of India, 4 (1&2).

### **Abstract**

Comparative treatment studies of attention deficit hyperactivity disorder are impeded by the paradigm perspectives, methodological quandaries, constricted and restricted focus, heterogeneity of children with ADHD, research design limitations or preferences, and treatment responsiveness. Comparisons are drawn among the five major treatment modalities for ADHD: stimulant treatments, primarily methylphenidate; behavioral treatment, including skill training, contingency management and parent training; cognitive behavioral or self regulation therapies; alternative therapies, such as yoga, music therapies, diet control, etc.; and the multimodal approach for the treatment of ADHD. The paper finally suggests more longitudinal research in the area of multimodal and other non-medical intervention methods (non-pharmaceutical-company sponsored area) to enhance their time and cost efficiency and to reduce their technicality and cumbersomeness.

### **Prevalence of Attention Deficit Hyperactivity Disorder in primary school children**

Venkata Jyothsna Akam and Panicker Anuja S (2013). Indian Journal of Psychiatry, 55 (4), 338-42

### **Abstract**

Context: There is a lacuna of studies on Attention Deficit Hyperactivity Disorder (ADHD) in the Indian context.

Aims: (i) To identify the prevalence of ADHD in primary school children, (ii) To identify the gender difference in the prevalence of ADHD, (iii) To compare the distribution of ADHD among different socioeconomic status, (iv) To identify the presence of any co-morbid factors associated with ADHD.

**Settings and Design:** This is a cross sectional study of school aged children selected from four different schools in Coimbatore district.

**Materials and Methods:** Seven hundred seventy children aged between 6 and 11 years were selected from four schools in Coimbatore district after obtaining informed consent from their parents. The presence of ADHD was assessed by using Conner's Abbreviated Rating Scale (CARS) given to parents and teachers. The children identified as having ADHD were assessed for the presence of any co-morbid factors by administering Children's Behavioural Questionnaire (CBQ) to the teachers and Personal Information Questionnaire to the parents.

**Statistical Analysis:** Statistical Product and Service Solutions (SPSS) 10 software, Mean and Standard Deviation, and student's t test were used for statistical analysis.

**Results:** The prevalence of ADHD among primary school children was found to be 11.32%. Prevalence was found to be higher among the males (66.7%) as compared to that of females (33.3%). The prevalence among lower socio-economic group was found to be 16.33% and that among middle socio-economic group was 6.84%. The prevalence was highest in the age group 9 and 10 years.

**Conclusion:** The present study shows a high prevalence of ADHD among primary school children with a higher prevalence among the males than the females.

## **A Follow-up Study of Academic Functioning and Social Adjustment in Children with Attention Deficit Hyperactivity Disorder**

Garg Jasmin and Priti Arun (2013). Indian Journal of Psychological Medicine, 35 (1), 47-52.

## **Abstract**

**BACKGROUND:** Attention deficit hyperactivity disorder (ADHD) persists in a majority of adolescents. It has been reported that ADHD patients have poor social functioning and risk for developing co-morbid psychiatric illnesses.

**Aims:** To determine the retention of diagnosis of ADHD and to assess social adjustment, academic functioning and co-morbidities at follow-up.

**Design:** Retrospective cohort study.

**Materials and Methods:** ADHD patients of 5-14 years of age who came to the out-patient department from 2005 to 2008 were contacted telephonically. Fifty one patients could be contacted. Parents of patients were interviewed using Vanderbilt ADHD Diagnostic Parent Rating Scale for diagnosing ADHD and co-morbidities. Social Adjustment Inventory for Children and Adolescent was administered for assessing their academic and social functioning. Chi square test, Mann-Whitney Test, Kruskal-Wallis Test, and Pearson's product moment correlations were used for statistical analysis.

**Results:** At current assessment, out of 51 patients, 38 were still fulfilling diagnosis of ADHD. Of these, 21 were of inattention type, 3 were hyperactive, and 14 were of combined type. Social functioning and academic functioning were significantly better in those who currently did not fulfill the criteria for ADHD (N=13). Twelve patients developed features of oppositional defiant disorder (ODD)/conduct disorder (CD) at follow-up.

**Conclusions:** ADHD persists in the majority of adolescents. Decline with age is seen more in hyperactive/impulsive symptoms than inattentive symptoms. Several adolescents also develop features of ODD/CD in addition to poorer functioning. Continuation of treatment is crucial to prevent such consequences.

## **Neurological soft signs in children with attention deficit hyperactivity disorder**

Patankar V.C., Sangle J.P., Shah Henal R., Dave Kamath R.M. (2012). Indian Journal of Psychiatry, 54 (2), 159-165.

### **Abstract**

**Context:** Attention deficit hyperactivity disorder (ADHD) is a common neuro-developmental disorder with wide repercussions. Since it is etiologically related to delayed maturation, neurological soft signs (NSS) could be a tool to assess this. Further the correlation of NSS with severity and type of ADHD and presence of Specific Learning Disability (SLD) would give further insight into it. **AIMS:** To study neurological soft signs and risk factors (type, mode of delivery, and milestones) in children with ADHD and to correlate NSS with type and severity of ADHD and with co-morbid Specific Learning Disability.

**Settings and Design:** The study was carried out in Child care services of a tertiary teaching urban hospital. It was a cross-sectional single interview study.

**Materials and Methods:** 52 consecutive children diagnosed as having ADHD were assessed for the presence of neurological soft signs using Revised Physical and Neurological Examination soft Signs scale (PANESS). The ADHD was rated by parents using ADHD parent rating scale.

**Statistical Analysis:** The data was analyzed using the chi-squared test and Pearson's co-relational analysis.

**Results and Conclusions:** Neurological soft signs are present in 84% of children. They are equally present in both the inattentive-hyperactive and impulsive-hyperactive types of ADHD. The presence of neurological soft signs in ADHD are independent of the presence of co-morbid SLD. Dysrhythmias and overflow

with gait were typically seen for impulsive-hyperactive type and higher severity of ADHD is related to more errors.

## **An exploratory clinical study of adult attention deficit/hyperactivity disorder from India**

Sitholey Prasbhat, Agarwal Vivek, and Sharma Swapnil (2009).  
The Indian Journal of Medical Research, 129 (1), 83-88.

### **Abstract**

**Background and Objective:** Although adult attention-deficit/hyperactivity disorder (ADHD) is well recognized in western countries, there are no reports of adult ADHD from India. Therefore, this study was planned to identify ADHD in adults in an Indian psychiatry outpatient setting and elicit its phenomenology and co-morbidities.

**Methods:** A total of 283 adults were screened using Adult ADHD Self-Report Scale-v1.1 (ASRSV1.1) screener. Screen positives were evaluated on ASRSv1.1 symptom checklist, World Mental Health Survey Initiative Version of the World Health Organization Composite International Diagnostic Interview (WMH-CIDI) and by clinical assessments. DSM-IV-TR and Wender-Utah criteria were used for diagnosis.

**Results:** Twenty five men (mean age  $\pm$  SD, 23.4  $\pm$  5.6 yr) were diagnosed as having adult ADHD. The subjects' most common presentations were of losing temper and poor academic performance. The most common ADHD symptoms were difficulty in sustaining attention, easy distractibility, often losing things, and blurting out answers. A majority (80%) of the subjects had one or more psychiatric co-morbidity like oppositional defiant disorder, major depressive disorder and substance abuse/dependence.

Intrepretation and Conclusion: Adult ADHD can be diagnosed in an Indian psychiatry outpatient setting. ADHD adults infrequently presented with the core symptoms of the disorder and had high psychiatric co-morbidity rates.

### **Prevalence of attention deficit hyperactivity disorder in 6-8 year old school children**

Gupta A. and Mishra B.P. (2011). Indian Journal of Psychiatry, 1, 59-60.

#### **Abstract**

Background: Prevalence of Attention Deficit Hyperactivity Disorder in 6-8 year old School Children Attention Deficits and Hyper Activity is a common but under diagnosed disorder in India.

Aims: A study was undertaken to find out the prevalence of attention deficit hyperactivity disorder in 6-8 year old school children in Ludhiana District.

Methodology: The study comprised of 2224 children who were taken from 3 different socioeconomic strata of the society. Each child was screened by the SNAP-IV scale (teachers rating) for Attention Deficit Hyperactive Disorder (ADHD) and oppositional defiant disorder (ODD). A total of 78 children who were positive on this scale were called to the hospital for detailed assessment.

Results: It was found that there is a considerably high prevalence of ADHD in school going children, more in males 4.35% than in females 2.48%. Overall, the prevalence of ADHD increases with age while socio-economic status appears to have minimal effect on the prevalence of ADHD. The most common subtype is the combined type followed by inattentive and hyperactive/

impulsive type respectively. Male sex and younger age predispose to predominantly inattentive type of disorder while female sex and older age predispose to predominantly inattentive type of disorder. ODD as co-morbid to ADHD is more common in males with increase in prevalence with increasing age. Prevalence of ADHD is more common in first born especially the only child while other socio-demographic factors do not seem to have significant influence on the prevalence of ADHD. Males show higher problematic behaviour and problem on more symptoms as compared to females.

**Conclusions:** The incidence and prevalence of Attention Deficit and Hyper Activity Disorder is on the rise in school going children. There should be proper attention and focus of professionals in the field to spread awareness and effective management strategies are required in current scenario.

## **Treatment of attention-deficit hyperactivity disorder**

Murray L. and Patel D.R. (2001). Treatment of attention-deficit hyperactivity disorder, *The Indian Journal of Pediatrics*, 68 (10), 1-9.

### **Abstract**

Attention-deficit hyperactivity disorder (ADHD) is a common disorder among children and adolescents with reported prevalence rates of between 3 and 10 %. Recent reports suggest that a multimodal treatment approach is preferable to address many symptoms of ADHD and its associated problems for the children, the family, and the school. Stimulant medications remain the mainstay of treatment and are highly effective in more than 75% of patients. Improvement in the core symptoms of inattention, impulsivity, and hyperactivity are most noticeable. Recently

approved extended release preparation of methylphenidate will allow once a day dosing. Reports of effectiveness of some non-stimulant medications such as bupropion, especially for adolescents, appear promising. A number of behavioral and psychosocial interventions can be used effectively as part of multimodal approach to address many ADHD-related problems. This article provides an update on practical information on the treatment of children and adolescents with ADHD who do not have other associated psychiatric disorders.

### **A Comparative Study of Social, Adaptive, Relational and Global Functioning of Adolescents with OCD and ADHD**

Rathi A, Sitholey P, Agarwal A, et al (2011). Delhi Psychiatry Journal, 14(2), 246-252.

#### **Abstract**

Attention Deficit Hyperactivity Disorder (ADHD) and Obsessive Compulsive Disorder (OCD) are one of the most common childhood and adolescent neuropsychiatric disorders. Adolescents with these disorders experience difficulties and impairments in various domains of life. However studies on functional impairments in adolescents with these disorders are lacking in India. This study was conducted with the aim to study and compare the functional impairments of Indian adolescents suffering with these disorders. Methods – 57 adolescents (36 having ADHD and 21 having OCD) between the age group 13 years to less than 18 years were recruited during the study period. HONOSCA, VABSII and C-GAS were applied to study the social, relational, emotional, adaptive and global functioning of these adolescents. The two groups were compared with each other using appropriate statistical methods. Result – Adolescents with

ADHD had significantly greater impairments in the areas of 'disruptive, antisocial and aggressive behavior', 'peer relationships' and 'self care and independence' whereas adolescents with OCD had significantly greater impairments in the areas of 'emotional and related problems' and 'poor school attendance'. Significantly greater number of adolescents with ADHD were below average in their functioning in the 'receptive' (77.8%) and 'written' (75%) subdomain and overall in the 'communication' domain (63.9%) as compared to the adolescents having OCD. Adolescents with ADHD were more impaired in their global functioning as compared to adolescents with OCD. Conclusion - There are important differences in the various correlates of functioning between the two groups of adolescents. The present findings have implications in the planning for treatment intervention in these adolescents to make them more cost effective and efficient.

## **Diagnosis and management of children with attention deficit hyperactivity disorder**

Malhi, P. and Singhi P. (2001). The Indian Journal of Pediatrics, 68 (6), 547-555.

### **Abstract**

Attention deficit hyperactivity disorder (ADHD) is one of the most prevalent childhood psychiatric disorder which is characterized by three core symptoms of inattention, hyperactivity and impulsivity. It is estimated that 5% to 10% of school aged children suffer from this disorder. This disorder is more common in boys than girls. Comorbidity is a major problem and is present in as many as two thirds of children with ADHD. A multiple modality approach to treatment which combines pharmacotherapy, psycho education, behaviour therapy, environmental changes and social skills training is recommended. The outcome of ADHD is

variable and unless properly treated in early years may predispose the child to serious psychopathology in adulthood.

### **Attention deficit hyperactivity disorder: A review for family physicians**

Karande S. (2005). Indian Journal of Medical Science, 59 (12), 547-556.

#### **Abstract**

Attention deficit hyperactivity disorder (ADHD) is a chronic behavioral disorder characterized by persistent hyperactivity, impulsivity, and inattention that impairs educational achievement and/or social functioning. Its diagnosis is made by ascertaining whether the child's specific behaviors meet the diagnostic and statistical manual of mental disorders-IV-revised criteria. Its etiology is still unclear but recent studies suggest that genetics plays a major role in conferring susceptibility. Comorbidity with psychiatric disorders such as anxiety disorder, depression, oppositional defiant disorder and conduct disorder; and with specific learning disability is not uncommon. Although medication works well in most cases of ADHD, optimal treatment requires integrated medical and behavioral treatment. Methylphenidate (MPH) and atomoxetine are the two drugs being currently prescribed and their efficacy in decreasing the symptoms of ADHD is well documented. Psychoeducational interventions in school can help increase the successful functioning of affected children and improve their academic performance. Almost half of affected children continue to show significant symptoms of the disorder into adolescence and young adulthood. The family physician can play an important role in detecting this condition early, coordinating its assessment and treatment, counseling the parents and classroom teacher, and monitoring the child's academic and psychosocial progress on a long-term basis.

## **Comorbidity between Borderline Personality Disorder and Attention Deficit Hyperactivity Disorder among Adults: A Cross Cultural Comparison.**

Hussain, Siddiq Najamuddin Mohammed (2008). Ph.D Thesis Psychology, Jamia Millia Islamia, New Delhi

Supervisor : Prof. Waheeda Khan

### **Abstract**

Borderline Personality Disorder (BPD) is a disorder of emotional, cognitive, behavioral and interpersonal dysregulation. The clinical picture of BPD described as a way of being in the world that involves massive mood fluctuations, intense relationships, conflicting self identification, constant manipulation, and impulsiveness, anxiety, insecurity and paranoid ideation. Adult Attention Deficit Hyperactivity Disorder (ADHD), a common neurobehavioral disorder defined by inattention, impulsiveness and motor hyperactivity. Poor organization, unstable interpersonal relationships, and low self-esteem, draws the attention towards the shared symptomatology between them. The aspect of comorbidity as explained by the existence of more than one psychiatric diagnosis in the same person; was the main rationale of the study.

The objective of the present investigation was to study the relationship between BPD and ADHD and to further check whether cultural differences affect the symptomatology and comorbidity of these two disorders. The hypotheses were formulated to see whether there is significant existence of comorbidity of RPD and ADI-ID in India and Kuwait. Further to see significant occurrence of anger, affective instability and Impulsiveness as commonly shared by BPD and ADHD adults of India and Kuwait and differences between two cultures on the

grounds of common symptoms. The total sample in the research comprised of 60 already diagnosed BPD cases: 30 from each country. Keeping in view the objectives, data collection was carried out in two phases, the first phase focused on screening out the BPD+ADHD patients as per the requirement of the sample. This sample was obtained through application of the SCID-II to detect BPD and WURS (Wender Utah Rating scale) administered to get data on ADHD. In the second phase, the sample of 60 BPD+ADHD was further measured on three variables i.e. clinical anger, impulsivity, and affective instability. Mean scores of WURS were higher in Kuwaiti sample than Indian one, explaining that ADITD symptoms are significantly present in BPDs in Kuwaiti sample.

Between group differences were analyzed by applying independent samples t-test, and differences were not significant on any clinical variable and for age, gender and marital status, Pearson product method of co-relation was used to see the relation between dependant variables, r-values showed high correlation between BPD, anger MSRS and ADI-ID. ADHD also showed a high correlation with BPD, anger, impulsivity MS (LM) and MS (RS). With regards to the results of intercorrelation, India and Kuwait showed significant differences; in India all the variables were strongly correlated where as in Kuwait sample the r- values were very low.

The results of Multiple Regression analyses explained the comorbidity between BPD and ADITD as these predicted each other significantly and contributed equally to each other. In Indian sample BPD was predicted by anger and impulsivity whereas in Kuwaiti sample BPD was predicted by ADHD, with 23% contribution to BPD. ADIID in the same group was predicted by anger and BPD, showing 49% contribution of anger and BPD in the prediction of ADHD. Qualitative analyses of case studies supplemented the meaningful interpretation of the quantitative data.

To conclude, results of the total sample confirm the strong partnership of BPD and ADHD, they predict each other with absolute significance, but in individual samples there are differences among cultures. In India BPD and ADI-ID are predicted indirectly through anger, impulsivity and mood swings, whereas in Kuwait ADI ID and BPD are direct predictors of each other accompanied by anger in predicting ADHD.

### **A Study on Improving Attention through Educational Strategies of Children with Attention Deficit Hyper activity Disorders (ADHD)**

Chadha Anupriya (2003). Ph.D. Thesis. Faculty of Education, Jamia Millia Islamia, New Delhi

Supervisor : Prof. S.R. Mittal

#### **Abstract**

For a long time educators have deliberated upon the causes of school drop-outs. By and large, school drop-outs have been attributed to poverty and the circumstances of a poor family. Child abuse has been another significant cause of school drop-outs. But rarely has it been realized that 10% of the child population may suffer from some physical or mental impairment. Children with Attention Deficit Hyperactivity Disorders are impulsive, distractible and inattentive. Lerner and Lowenthal (1995) describe the primary characteristics of ADHD as follows: "Individuals with ADHD have difficulty focusing their attention and concentrating on tasks. The three primary characteristics of ADHD are inattention, impulsivity and hyperactivity.

It is only in the recent decade it has been realized that ADHD could be the result of slight brain damage. Hence, usually medicines are used to deal with this problem. But these have

side effects. Therefore, this investigator felt that there was an imperative need for exploring a safer and a more convenient alternative, which could be of more use to teachers, parents and children in the Indian setting. Hence, this study was taken up. It was felt that the effectiveness of a safer option could be best determined by adopting an experimental design. Thus, control and experimental groups were formed.

The Universe of the study was intended to be 12 schools in South Delhi. But permission was granted only in 6 schools to conduct the study. Therefore, the study was limited to 6 schools, 5 Govt. and one private. The total universe was 1505 students. This comprised 871 boys and 634 girls.

Objectives:

The following objectives were adopted:

- To identify children in primary schools reported to have ADHD by the teachers
- To design appropriate educational interventions to be given to children with marked inattention, impulsivity and hyperactivity
- To measure the efficacy of educational interventions on the experimental groups
- To gauge the extent of benefit accruing to the experimental group from the interventions given.

Hypothesis:

Based on these objectives, the following three hypothesis were tested:

- No difference shall be found in the level of attention of children before and after they are given the designated educational interventions

- No difference shall be found between boys and girls in the prevalence of ADHD
- Differences in various age groups and the level of ADHD shall be found The total number of children identified as having ADHD was 96. This number was arrived at by using the criterion of 10 or more than 10 symptoms on the checklist used in the study. A control group and an experimental group were formed. The experimental group had 52 children and the control group had 44 children. They were matched on teacher rating and performance in the last examination.

Specially illustrated teaching learning material was developed to teach children in the experimental group. After giving these interventions for 2 weeks, an interval of 2 weeks was given. At the end of the interval, both the experimental group and the control group were tested on their performance in English and Maths using a paper and pencil test.

#### Major Findings:

- The prevalence of ADHD in the six schools studied was 6.38%.
- The prevalence was significantly higher among boys than among girls i.e. 75 boys and 21 girls with ADHD were identified, the ratio of boys to girls with ADHD being 3.6:1. This means that ADHD is 3.6 times more in boys than in girls
- The teaching strategies used brought about significant improvement both among boys and girls in the experimental group as compared to the control group.
- Girls performed better in English than boys
- The range of mean improvement varied from 28.55-40.29 and 27.00-50.67 in English
- No relationship between age and ADHD was discovered.

## **The effect of music and dance on children with attention deficit hyperactivity disorder (ADHD)**

D'Cruz Natasha (2011). Ph.D. Thesis (Psychology). Savitribai Pule Pune University.

Supervisor : Dr. Usha Ram

### **Abstract**

With the growing awareness and incidence of ADHD as well the absence of a satisfactory therapy, research in alternative therapeutic interventions for ADHD is the need of the hour. The present study was a step in this direction. An attempt was made to study two such alternative therapies, namely Dance and Music to reduce ADHD symptoms as measured by The ADHD Rating Scale- IV by Du Paul (1998). The teachers and parents of 90 boys aged 10 to 12 years studying in class V to VII completed Du Paul's ADHD Rating Scale-IV. This helped identify the boys who were then, randomly divided into a Dance intervention group ( $N = 30$ ), a Music intervention group ( $N = 30$ ) and a Comparison group ( $N = 30$ ). The intervention groups received 30 sessions of 40 minutes each of Dance and Music intervention respectively over a period of approximately six weeks. The subscales of the Rating Scale were selected as parameters of ADHD symptoms and were taken at the pretest as well as after the intervention. Analysis of Covariance, holding the pretest as covariates revealed that the Post Dance intervention scores were significantly lower than the Comparison group on the Inattention- Teachers ratings ( $F(1, 58) = 26.47, p < .01$ ), Hyperactivity-Impulsivity- Teachers rating ( $F(1, 58) = 11.00, p < .01$ ), Combined- Teachers rating ( $F(1, 58) = 22.48, p < .01$ ), Inattention- Parent's Rating ( $F(1, 58) = 26.53, p < .01$ ), Hyperactivity- Impulsivity Parent's Rating ( $F(1, 58) = 20.28, p < .01$ ) and Combined Parent's Rating ( $F(1, 58) = 30.50, p < .01$ ).

## **Effect of sensory diet through outdoor play on functional behaviour in children with ADHD**

Sahoo S.K. and Senapati. A. (2014). Effect of sensory diet through outdoor play on functional behaviour in children with ADHD. The Indian Journal of Occupational Therapy, 46(2).

### **Abstract**

**Introduction :** Children with ADHD characterized with inattention, hyperactive and impulsive behaviour due to such character their functional behaviour is disturbed. Providing sensory integration along with sensory diet is one of the treatments of choice of these children. Many researchers have stated that outdoor play provides opportunities to explore the natural world, interact with peers & engaged in active play. Therefore in this study attempt has been taken to establish the influence of outdoor play combined with sensory diet on functional behaviour in children with ADHD.

**Methodology :** Randomly twenty eight subjects aged 6-12 years were selected by screening with sensory profile and ADHD rating scale. The subjects were divided into two groups with equal no of subjects conveniently in a random order. The baseline data of functional behaviour assessment done by using Weiss Functional Impairment Rating Scale (WFIRS). The subjects of experimental group were provided sensory diet through outdoor play along with SI intervention and the subjects of control group were provided SI intervention only. The total duration of the treatment was two months. The post intervention data was collected at the end of the treatment session.

**Result :** The statistical results are suggestive of sensory diet based outdoor play with SI intervention as an effective therapeutic procedure in developing functional behaviour in children with ADHD.

Conclusion : From the results it can be concluded that sensory diet combined with outdoor play is an effective intervention to enhance functional behaviour in children with ADHD.

## **Pharmacologic treatment of attention-deficit hyperactivity disorder**

Greydanus D.E. (2005). Pharmacologic treatment of attention-deficit hyperactivity disorder, *Indian Journal of Pediatrics*, 72 (1), 953-960

### **Abstract**

Attention-deficit hyperactivity disorder (ADHD) is highly prevalent in children and adolescents. Highly effective pharmacological treatments are available that allow the child and the adolescent to function at his/her full potential. Various preparations of methylphenidate and amphetamines have been used for a long time in the treatment of ADHD. This article reviews these and some of the newer drugs used in the treatment of ADHD, including atomoxetine and bupropion.

## **Sleep disorders in children with attention-deficit hyperactivity disorder**

Bhargava S.C. and Sethi S. (2005). Sleep disorders in children with attention-deficit hyperactivity disorder, *Indian Journal of Psychiatry*, 47 (2), 113-115.

### **Abstract**

Background:

Sleep disturbances are frequently associated with attention-deficit hyperactivity disorder (ADHD) though they are not included in

the current classification systems such as the DSM-IV and ICD-10. These problems may complicate the course of the illness as they may be associated with the treatment given.

**Aim:**

To evaluate children with ADHD for sleep-related problems.

**Methods:**

The study group comprised 32 children with ADHD and their 20 healthy siblings made up the control group. Sleep-related problems were assessed on a checklist prepared on the basis of the Children Sleep Questionnaire-parent version.

**Results:**

A majority of the children with ADHD had at least one sleep-related problem. Comparison with healthy siblings revealed non-significant differences on the parameters of sleep-related movement disorders and parasomnias.

**Conclusion:**

There is a need for more detailed studies involving sensitive parameters.

## Chapter 4

# LEARNING DISABILITY



## **A Comparative Study on Personality Characteristics of Learning Disabled and Non-Learning Disabled Among Primary School Children**

Sharma, Gitanjali (2005). Journal of Rehabilitation Council of India, 1(1).

### **Abstract**

A modest attempt was made in the present study to examine the personality characteristics of 180 subjects both boys and girls of ages 8, 9, 10 years old with Learning Disabilities (LD) specifically dyslexia, dysgraphia, dyscalculia from 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> classes belonging to urban and rural primary schools of Andhra Pradesh, India with irrespective of their socio-economical status, cultural aspects, parents' educational background, medium of education, teachers' educational qualification and teaching skills. The subjects were identified based on their scholastic achievements shows a Spelling Dictation Test, an Oral Reading Test, a Reading Comprehension Test and an Arithmetic Test (developed specifically for the purpose) along with mental ability tests like Raven's Standard Progressive Matrices and Draw-a-Man (DAM). Incidence of Minimal Brain Dysfunction (MBD) among the subjects was checked using Bender-Gestalt Test and Bentens' Visual Retentions Test to ensure that there were no cases of MBD. An equal number of normal children (Non-LD, 180 subjects both boys and girls) with the same age group, IQ level and class were also examined for a comparative study. An adapted version of Cattell's Children Personality Questionnaire (CPQ) was administered to the subjects with LD and NLD. The results indicate that there were significant differences in the personality characteristics of LD and NLD children. Examination of scores obtained by LD and NLD on CPQ portray the LD child as one with problems in social and emotional adjustments. He appears to be more

schizothyme, rigid, phlegmatic and pessimistic than the NLD. There was a significant gender effect among LD children in that boys were more assertive, independent, aggressive, stubborn and dominant than the LD girls. The study points out that the older LD children tend to show more maladaptive behavioural disposition than the younger LD and that there is a significant gender effect among LD children.

### **A Study on Educational Adjustment of Student with Dyslexia**

Prasad, S. K. and Kumar, Anil (2014). International Journal of Psychology and Education, 1 (11), 63-69.

#### **Abstract**

Adjustment is defined as behaviour that permits people to meet the demands of the environment. Sometimes these demands are physical or sometimes the demands are more psychological leaving home for the first time, behaviour in the classroom or with the classmates, preparing for the job interviews, mourning the death of the loved one. We may adjust to such demands by making new friends, rehearsing what we shall say in the interview as what behaviour is suitable.

The study was conducted with objective to measure the impact of dyslexia on the educational adjustment pattern among the male and female students. The multi-mixed method of research design was used.

The sample consists of 30 students attending English medium school of Delhi region having average intelligence and diagnosed as dyslexia with age range of 11 to 18 years.

The Adjustment Inventory for School Students (AISS) by A.K.P. Sinha and R.P. Singh (1993) was used to measure the educational adjustment pattern.

The study concludes that students with dyslexia are having problem with educational adjustment. However there was no significant difference in educational adjustment pattern of male and female students with dyslexia. The result of the study is constrained to small sample, hence may not be generalized.

### **Learning Divide: Learning Disability Ignored by the Learned Society (Issues, Identification & Future Vision)**

Vashishtha, K. C. and Gupta, Neha (2012). Journal of Rehabilitation Council of India, 8 (1 & 2).

#### **Abstract**

Learning difficulties and learning problems are the first descriptive terms used when a child begins to have trouble in school. However, there is a clear distinction between the two, with learning difficulties being a broader term. Children develop at different rates and sometimes whatever pretends to be a learning disability, gets resolve with the maturity of child. Children having language disorders are very often misinterpreted as learning disabled as these children usually come from impoverished backgrounds and sometimes also have family problems which have adverse impact on their social behavior. The term learning difficulty generally applied to the children having comparatively greater difficulty in learning than the normal children of their age group. They are unable to utilize the educational facilities available in school and society. They have problems with every day learning activities including reading, spelling and numeracy skills in school environment. Children with specific learning difficulties may show problems in all three areas or only one or two. Reading and spelling are closely associated skills and it is rare to find reading disabled children who are not at all handicapped in spelling. Most children are likely to be behind

in all three areas, although there are occasional reports of sub-groups showing rather more of one or the other deficit. Learning disability is an umbrella term covering many different intellectual disabilities namely (1) receptive language skills (listening), (2) expressive language skills (speaking), (3) basic reading skills, (4) reading comprehension, (5) written expressions skills, (6) mathematical calculations, and (7) mathematical reasoning skill. Another classification of LD includes Dyslexia, a language and reading disability; Dyscalculia, a mathematical disability; Dysgraphia, a writing disorder; Dyspraxia, a motor coordination problem; Central Auditory Processing Disorder, difficulty in processing and remembering language – related tasks, Non-verbal Learning Disorders, including trouble with non-verbal cues, Visual Perceptual/Visual Motor Deficit, involving reversal of letters, problem in copying cannot, language disorders, difficulty in understanding spoken language and reading comprehension. Since the 1980s the broad definition of LD formulated by the US National Joint Committee on LD (NJCLD, 1981/1988) with representation from all concerned disciplines has been widely used. It reads as follows: Learning disability is a general term that refers to a combination of disorders represented by severe difficulties in the acquisition of listening, speaking, reading, writing, reasoning or mathematical skills. These disorders are intrinsic to the individual caused due to dysfunction in central nervous system and may occur across the life span.

### **Effect of Remediation on Memory Deficits Among Children With Learning Disability**

Verma, Preeti (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

#### **Abstract**

Thirty-six children with Learning Disability (LD), were identified from among the 160 discrepant achievers screened from 1140

male students belonging to 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> grades of three English medium schools of Western suburb in Mumbai.

Standard score and regression methods were used to compute attitude achievement discrepancy. Children, whose difference score fell between -10 and -100 and 1(S.E.) of estimate below the predicted scores; common in at least two school subjects, were considered discrepant achievers. They were rated by their teachers on Behavioural Checklist for Screening the Learning Disabled (BCSLD). Those, scoring at or above 75<sup>th</sup> percentile were further administered WISC-III. Of these, who scored P>V by 12 to 15 points were designated learning disabled. They were N=36.

The thirty-six children with LD were randomly assigned to experimental and control groups (N=18 each group). The experimental group was exposed to treatment while the control group received note. But they did take pretest and all the post tests. First round of treatment was given for 15 days, followed by post test (O1). Quite a few could not reach the criterion. Hence a second course of treatment was given, followed by the post test (O2). A third post test was done after a blank period of next 15 days to test stability of gain.

2×4 repeated measure ANOVA and paired t test revealed that CBM based strategy training did not prove effective in remediation of memory deficit among children with LD, in a convincing manner.

Time emerged as a crucial variable. Two blocks of 15 days' treatment duration, benefited children with LD in remediation of their auditory and visual sequential memory deficits. But withdrawal of treatment after O2, extinguished or diminished the gain effect on other components of memory.

## **Effect of Teachers Counselling in Improving Scholastic Achievement of Their pupils with Specific Learning Disabilities**

Sharma, Gitanjai (2006). Journal of Rehabilitation Council of India, 2 (1-2).

### **Abstract**

The present study is an attempt to implement Teachers Counselling Program (TCP) for 42 Teachers of identified sample of pupils with Specific Learning Disabilities (SLD) from urban and rural elementary schools in Rayalaseema, Andhra Pradesh. Using Teachers Attitudes Questionnaire (TAQ) developed specifically for the purpose, assessed attitudes of the teachers towards the pupils with SLD and Non-SLD. Results of the study indicated a significant difference in the attitudes of the teachers of students with SLD and non-SLD. By taking account of the social, emotional and educational needs of the pupils at school, TCP was planned. The study showed a significant difference in pre-and post-intervention attitudes of the teachers and also significant differences in pre-and post-scholastic achievement tests of the SLD students. Thus, the study suggests the need for Teachers Counseling Program in improving the scholastic performance of pupils with Specific Learning Disabilities.

## **Attitudes of Parents towards Children with Specific Learning Disabilities**

Venkatakrishnashastry, Chandramuki, Indiramma and Vrandha, Narasimha (2012)

### **Abstract**

**Purpose:** This study explored parental attitudes towards children with specific learning disabilities.

**Method:** The study sample comprised parents of 60 children (30 boys and 30 girls) with Specific Learning Disability (SLD) who attend the Child and Adolescent Psychiatry Out-Patient Department at National Institute of Mental Health and Neurosciences, Bangalore, India. The attitudes of parents were assessed using the Parental Attitude Scale.

**Results:** The results revealed significant differences related to gender of the children on various domains of the scale.

**Conclusion:** The study highlights the need to educate parents to lower their expectations for children with specific learning disabilities, and to strengthen the social support network of these children's families.

## **Neuro-Cognitive Functioning in Children with Learning Difficulties**

Malhotra Shahzadi, Rajender Gaurav, Sharma Vibha, Singh T.B. and Bhatia, M.S. (2009). Delhi Psychiatry Journal, 12(2).

### **Abstract**

Learning difficulties can occur due to complex interplay of factors that may reside in the child's own constitution, temperament and cognitive abilities and/or in the background and quality of child's schooling and/ or in family related factors that affect interactions and emotional well being of the child. **Aims & Objectives:** To study the neuro-cognitive functioning of children with learning difficulties. **Method:** Forty children studying in English medium schools in Delhi from Grade 2nd to 5th who were reported to be having learning difficulties. The children were divided into two

groups (n=20, each.) One of the groups had children having learning disability. The other group had children with learning difficulties but without any diagnosable psychiatric/emotional/behavioural problems. All children were assessed for their intelligence, scholastic performance (on three basic subjects-Hindi, English and Mathematics)); Sustained attention; Verbal Working Memory, Visual Learning and Memory; Verbal Learning and Memory, Verbal Comprehension, Visuo-Constructive Ability and Visuo-Conceptual Skills.

Conclusions: Both the groups had impairment in assessed neuro-cognitive skills. Children with learning disability had significantly poorer performance on tasks of sustained attention, visual memory and learning, delayed recall and visuo constructive skills. There were no differences among children on other assessed functions

## **Prevalence of specific developmental disorder of scholastic skill in school students in Chandigarh, India**

Arun Priti, Chavan Bir Singh, Bhargava Rachna, Sharma Archana and Kaur Jaspreet (2011). Indian Journal of Medical Research, 138, 89-98.

### **Abstract**

Background & objectives: Several studies have been conducted in India to determine the prevalence of learning disabilities in school children which has been reported to be 3-10 per cent among students population. The present study was conducted to find out prevalence of specific developmental disorder of scholastic skills in students of classes VII to XII and to find out feasibility of screening tool in Chandigarh, India.

**Methods:** A cross-sectional study on school students was carried out in two phases. The students were drawn from classes VII to XII from 10 schools of Chandigarh, India. Details of academic performance of all the students was taken, subjectively from class teachers and objectively from the marks obtained in the last academic session. In phase I, 2402 students were assessed. In phase II, 108 students were randomly selected for evaluation for assessing sensitivity and specificity of screening proforma for teachers. A total of 124 students from phase I and all students in phase II were assessed in detail. Tests of intelligence (Malin's Intelligence Scale for Indian Children and Standard Progressive Matrices), and NIMHANS Index for specific learning disability (SLD) battery were administered.

**Results:** A total of 38 students were found to be having specific developmental disorder of scholastic skills in phase I, that gave a prevalence of 1.58 per cent. Majority had mixed type of errors on SLD battery. There were more boys diagnosed with specific learning disability. Teacher's screening instrument had high sensitivity (90.385) and specificity (94.68).

**Interpretation & conclusions:** The findings of our study conducted in community, showed that specific learning disability was not identified even till later age. The screening instrument thus could be used by teachers to suspect students with specific learning disability.

### **Prevalence of specific learning disabilities among primary school children in a South Indian city.**

Mogasale Vijayalaxmi V, Patil Vishwanath D, Patil Nanasaheb M, and Mogasale Vittal (2011). The Indian Journal of Pediatrics, 79(3).

### **Abstract**

To measure the prevalence of specific learning disabilities (SpLDs) such as dyslexia, dysgraphia and dyscalculia among primary school children in a South Indian city.

A cross-sectional multi-staged stratified randomized cluster sampling study was conducted among children aged 8-11 years from third and fourth standard. A six level screening approach that commenced with identification of scholastic backwardness followed by stepwise exclusion of impaired vision and hearing, chronic medical conditions and subnormal intelligence was carried out among these children. In the final step, the remaining children were subjected to specific tests for reading, comprehension, writing and mathematical calculation. The prevalence of specific learning disabilities was 15.17% in sampled children, whereas 12.5%, 11.2% and 10.5% had dysgraphia, dyslexia and dyscalculia respectively.

### **A Study of the Influence of Some Personality Factors on the Achievement of Learning Disabled in Inclusive Settings.**

Punj, Bharti S. (2009). Ph.D., Education, M.J.P. Rohilkhand University, Bareilly.

### **Abstract**

When nearly one child out of seven children suffers from the problem of learning disabilities, it becomes the concern of teachers, parents and others associated with teaching learning process to look into the problem seriously and find the ways to have the solutions. It has been observed that many researchers investigated educational problems as well as make predictions on academic success or failures, concentrated mainly on cognitive measures ignoring personality factors. Personality factors like,

self esteem, locus of control and achievement motivation as well as many others have direct influence on student's academic performance. In the present study the researcher studied the influence of some personality factors on achievement of learning disabled in inclusive settings. Attempt was to find out how personality factors influence the achievement of learning disabled in inclusive settings. Hence the objectives of the study were: to study the Learning Disabled and Non Disabled with regard to: Self Esteem, Locus of Control and Achievement Motivation and to determine the Interactional Effects of these variables on Achievement of Learning Disabled and Non Disabled in Inclusive Settings. Sample for the present study had been obtained from students studying in different Inclusive schools of Bareilly city studying in VI standard. 895 students were screened from urban and semi urban areas of city. Finally 62 students with learning disabilities were selected as sample of the study and the same numbers of non disabled were also selected. The various tools employed for screening the learning disabled are :Identifying Questionnaire - Self with the help of Supervisor, Screening Device - Dr. Jayanthi Narayan, Raven's Standard Progressive Matrices – J. C. Raven, J. H. Court and J. Raven, Behavioral Check List to Screen Learning Disabled - Dr. Smriti Swarup and Dr. Dharmishta H. Mehta and Diagnostic Test of Learning Disability - Dr. Smriti Swarup and Dr. Dharmishta H. Mehta. For studying the personality factors, the tools used were: Self-Esteem Inventory Scale - Dr. Stanley Coopersmith, Locus of Control - Dr. Roma Pal and Achievement Motivation - Dr. Prayag Mehta. For studying the achievement, General Classroom Achievement Test - Dr. A. K Singh and Dr. A. Sen Gupta was used. Mean, S. D. and 't' values were computed to find out the significant differences between Learning Disabled and Non Disabled with regard to personality factors and achievement. Factor Analysis (2x2x2) experimental design of ANOVA was employed to study the Interactional effects of these variables. Findings revealed that Non-Disabled are better on Self-Esteem

than Learning Disabled, Learning Disabled are more External than Non-Disabled and Learning Disabled do not differ from Non Disabled with regard to Achievement Motivation. The insignificant Interactional effects indicate that there is no effect of these independent variables i.e. Self-Esteem, Locus of Control and Achievement Motivation on the Achievement of Learning Disabled and Non Disabled.

## **Diagnosis and Remediation of Language Disabilities of Primary School Children.**

Sharma Arvind (2009). Ph.D., Education, M.J.P. Rohilkhand University, Bareilly.

### **Abstract**

The goal is to understand a special subset of children those who seem to have unusually severe problems in learning language. These children with learning disabilities possess normal intellectual ability. They are not mentally retarded but do not seem to get benefit from sound instruction, despite the fact that they are motivated to learn. These children seem to be trying hard, but they fail, presumably as a result of some kind of cognitive difficulty; thus the present study is primarily designed to identify and provide remediation for disabilities developed by primary level students in language and to see the effectiveness of the remedial programme. The objectives of the study were 1) to diagnose the children with language disabilities at primary level studying in IIIrd & IVth standards. 2) To study the nature of language disabilities of learning disabled. 3) To plan out remedial programmes for different types of language disabilities. 4) To study the effect of remediation on achievement of children with language disabilities. 5) To study the effect of remediation on achievement of boys & girls with language disabilities. 6) To study the effect of remediation on achievement of rural & urban

children with language disabilities. Sample for the study was obtained from ten schools of Bareilly city of Uttar Pradesh studying in III and IV classes. The schools were selected randomly following either CBSE, ICSE and UP Board syllabus and located in urban, semi urban and rural areas. All the 740 children were screened for the purpose of the study and 96 were selected on the basis of specific criteria designed for the purpose of the study. Out of 96 subjects, 52 were boys and the remaining were girls. The tools used were Behavior check list for screening the learning disabled children (BCSLD), Raven's Standard Progressive Matrices (SPM), Diagnostic Test of Learning Disability (DTLD), and Grade Level Assessment Device (GLAD). The method employed for the study is one group experimental post test design. The data was analyzed with the help of t test and 2X2X2 ANOVA. The major findings of the study were: 1) the difference between the mean scores of achievement of two treatment groups was found significant, which means remedial methods are superior to conventional methods. 2) The interaction between type of treatment and gender was found significant, which implies that the type of treatment and gender had a significant effect on the achievement of children with language disabilities. 3) The interaction effect between type of treatment and locality, gender and locality and type of treatment, gender and locality was found insignificant.

## **Diagnosis and Remediation of Mathematical Difficulties.**

Venkateshwarlu, D. (2001). Ph.D., Education, MJP Rohilkhand University, Bareilly.

### **Abstract**

The objectives of the study were 1) To diagnose the children

with mathematical learning difficulties/disabilities at primary level studying in III and IV classes.2) to plan out remedial programmes for different types of mathematical difficulties/ disabilities. 3) to study the effect of remediation on achievement of children with mathematical difficulties/disabilities. A sample of 113 students was identified from ten schools of CBSE, ICSE and UP Board studying in Class III and IV. They were identified on the basis of specific criteria designed for the purpose of the study. The tools used were Grade Level Assessment Device for children with learning problems in schools and Arithmetic Diagnostic Test. The method employed for the study was single group experimental post test design. The data was analyzed with the help of t test and 2X2X2 ANOVA. The major findings of the study were: The difference between the mean scores of achievement of two treatment groups was found to be significant, which implies remedial methods were superior to conventional methods. 2) The interactional effect between type of treatment and gender was found significant which implies that the type of treatment and gender had a significant effect on the achievement of children with mathematical difficulties. 3) The interactional effect between the type of treatment and locality and gender and locality and type of treatment, gender and locality was found insignificant.

### **Developing a Multimedia Remedial Tracking Package for Dysgraphia Among Primary School Students with Specific Learning Disabilities**

Anilakumari M.C. (2013). Ph.D., Education (Pedagogical Sciences), Mahatma Gandhi University, Kottayam.

## **Abstract**

Research studies on student population estimate that 10 % of the elementary school population have Learning Disabilities (LD) serious enough to require special remediation. Learning Disabilities present themselves in many different ways and cover a broad spectrum of problems. Of those diagnosed with LD, many have Dysgraphia. This study aims at developing and experimenting a specially designed study material in the form of Multimedia Package based on the learning style and remediation for children who exhibit symptoms of Dysgraphia and closely related characteristics. The topic for this purpose is entitled as 'Developing a Multimedia Remedial Tracking Package for Dysgraphia among Primary School Students with Specific Learning Disabilities.' The study was survey cum experimental in nature. For the purpose, one group pre-test post-test design was adopted. The Investigator developed a Multimedia Remedial Tracking Package (MRTP), and the experimental group was taught through MRTP. The Investigator had also prepared and standardized a Dysgraphia Characteristics Inventory, Learning Style Inventory, a Test to measure the performance of students before and after the experiment, and an informal Proforma for Scholastic Backward students. During the time of experiment all these tools and adopted tools such as Ravens Coloured Progressive Matrices, Ekwall Informal Reading Inventory, and Diagnostic Test of Learning Disabilities were administered. The scores thus obtained were analyzed by using appropriate statistical techniques. The major conclusions of the study can be summarized as follows. MRTP is more effective on the performance of PSS with SLD having different learning styles with respect to different aspects of Dysgraphia, and with respect to different aspects of Dysgraphia Characteristics.

## **Development of a Multimedia Package for Students at Primary Level with Dyslexia**

Krishnan Sheeba (2013). Ph.D., Education (Pedagogical Sciences), Mahatma Gandhi University, Kottayam.

Guide : Dr. Celine Pereira

### **Abstract**

The study focuses on the development of a Multimedia Package for primary school students with special reference to Dyslexia. As a preface to the experiment, the Investigator on the basis of the detailed analysis of the Screening Test scores, identified Students with Specific Learning Disabilities and thereby those having Dyslexia. The Investigator developed a Reading Miscue Inventory (RMI) and a standardized Reading Assessment Test (RAT). RMI was used to find out the type of reading errors in the selected sample. Using RAT, the Investigator compared the extent of Dyslexia among the upper primary school students based on their Gender, Locality, Nature of school, Economic status and Type of the family. The analysis of the data revealed the need of a training for the upper primary school students with Dyslexia to minimize their reading miscues for the enhancement in reading. Based on the type of Reading Miscues and Learning Styles, a Multimedia Package (MMP) was prepared and the students were provided the experiential training. After developing the Multimedia Package, the effectiveness of the developed Multimedia Package was assessed using RMI & RAT. The effectiveness of the MMP for minimizing Reading Miscues viz. Omissions, Substitutions, Reversals, Additions, Repetitions, Mispronunciations and Refusals among upper primary school students with Dyslexia for the total sample, subsamples and the various categories within the sub-sample was found out using RMI. Also, its effectiveness for enhancing the reading attainment scores of upper primary school students was found out for the

total sample, sub-samples and the various categories within the experimental sample using RAT. Delayed post-test (RAT) results were compared totally and sub-sample wise to find out whether the MMP has any significant effect on the retention capacity of Dyslexic students. The quantitative analysis of the data collected was done using suitable statistical techniques such as computation of percentage, paired 't' test, ANCOVA, ANOVA, One-way Repeated Measures ANOVA and Pair-wise Multiple Comparison with Sidak correction. The findings of the study revealed that for the total sample, subsamples and various categories within the sub-samples, the developed MMP is effective in reducing the reading Miscues. Also significant enhancement was seen in the reading attainment scores and retention capacity of Dyslexic students after the intervention of the Multimedia Package. In order to propose the application dynamics of the study, an Evaluation Proforma is applied to experts, suggestions were collected. The evaluation results revealed the quality of the Multimedia Package.

## **Statistical Machine Learning Techniques for the prediction of learning disabilities in School-Age Children**

David, Julie M. (2012). Ph.D., Cochin University of Science and Technology, Cochin.

Guide : Dr. B. Kannan

### **Abstract**

Learning Disability (LD) is a general term that describes specific kinds of learning problems. It is a neurological condition that affects a child's brain and impairs his ability to carry out one or many specific tasks. The learning disabled children are neither slow nor mentally retarded. This disorder can make it problematic

for a child to learn as quickly or in the same way as some child who isn't affected by a learning disability. An affected child can have normal or above average intelligence. They may have difficulty paying attention, with reading or letter recognition, or with mathematics. It does not mean that children who have learning disabilities are less intelligent. In fact, many children who have learning disabilities are more intelligent than an average child. Learning disabilities vary from child to child. One child with LD may not have the same kind of learning problems as another child with LD. There is no cure for learning disabilities and they are life-long. However, children with LD can be high achievers and can be taught ways to get around the learning disability. The problems of children with specific learning disabilities have been a cause of concern to parents and teachers for some time. With the right help, children with LD can and do learn successfully. Mental retardation, emotional disorders and poor socioeconomic status are not considered learning disabilities. Learning disabilities have been recognized in some countries for much of the 20th century, in other countries only in the latter half of the century and yet not at all in other places. The concept is still new in many developing countries. In India, the research conducted in learning disability has been primarily done over the last two decades and is today comparable with the research carried out in west nearly half a century ago. About 10% children enrolled in schools having LD. When a LD is suspected based on parent and/or teacher observations, a formal evaluation of the child is necessary. A parent can request this evaluation, or the school might advise it. Many types of assessment tests are available. Just as there are many different iv types of LDs, there are a variety of tests that may be done to pinpoint the problem. Many professionals can be involved in the testing process. The purpose of LD assessment is to determine child's strengths and weaknesses and to understand how he or she best learns and where they have difficulty. In this research work, data mining using machine learning techniques are used to analyze the symptoms of LD,

establish interrelationships between them and evaluate the relative importance of these symptoms. To increase the diagnostic accuracy of learning disability prediction, a knowledge based tool based on statistical machine learning or data mining techniques, with high accuracy, according to the knowledge obtained from the clinical information, is proposed. The basic idea of the developed knowledge based tool is to increase the accuracy of the learning disability assessment and reduce the time used for the same. Different statistical machine learning techniques in data mining are used in the study. Identifying the important parameters of LD prediction using the data mining techniques, identifying the hidden relationship between the symptoms of LD and estimating the relative significance of each symptoms of LD are also the parts of the objectives of this research work. The developed tool has many advantages compared to the traditional methods of using check lists in determination of learning disabilities. For improving the performance of various classifiers, we developed some preprocessing methods for the LD prediction system. A new system based on fuzzy and rough set models are also developed for LD prediction. Here also the importance of pre-processing is studied. A Graphical User Interface (GUI) is designed for developing an integrated knowledge based tool for prediction of LD as well as its degree. The designed tool stores the details of the children in the student database and retrieves their LD report as and when required. The developed tool is very user friendly and it not only predicts the LD but also its class like low, minor or major with percentage of LD in each class. Depending upon the degree of LD, the school authorities/parents can recommend the child for further treatment with councilors/special educators/LD clinics, for proper remedial solutions. Thus the developed tool is helpful in finding the LD at an early stage. With the right help and intervention at proper time, children with LD can succeed in school and go on to be successful later in life, where the research work is found much relevant as early detection of developmental differences is

an early signal of a learning disability and thus the problems that are spotted early can be easier to correct. The present study undoubtedly proves the effectiveness of the tool developed based on various machine learning techniques. It also identifies the important parameters of LD and accurately predicts the learning disability in school age children. This thesis makes several major contributions in technical, general and social areas. The results are found very beneficial to the parents, teachers and the institutions. They are able to diagnose the child's problem at an early stage and can go for the proper treatments/counseling at the correct time so as to avoid the academic and social losses.

## **Learning and other developmental disorders in India**

Philip J. (2010). Indian Journal of Psychiatry, 52 (11), 224-228

### **Abstract**

Articles that include Learning and Developmental Disorders have been gathered from the Indian Journal of Psychiatry (IJP) archives, and are broadly discussed. Learning disorders (LD) are not pure syndromes. They are developmental disorders and are multi-dimensional in nature. Research areas in Child Psychiatry in India remain largely unexplored, especially developmental disorders. The potential for research is mind boggling. Original research must keep pace with work in the west, and must be of a high order. Results must be published in our national journal and not abroad, in order to bestow prestige to our journal, so the world can sit up and take notice.

## **A Novel Hybrid Feature Selection Approach for the Prediction of Learning Disabilities in School-Aged Children**

Sabu M.K. (2015). International Journal of Artificial Intelligence & Applications, 6 (2).

### **Abstract**

Feature selection is one of the most fundamental steps in machine learning. It is closely related to dimensionality reduction. A commonly used approach in feature selection is ranking the individual features according to some criteria and then search for an optimal feature subset based on an evaluation criterion to test the optimality. The objective of this work is to predict more accurately the presence of Learning Disability (LD) in school-aged children with reduced number of symptoms. For this purpose, a novel hybrid feature selection approach is proposed by integrating a popular Rough Set based feature ranking process with a modified backward feature elimination algorithm. The process of feature ranking follows a method of calculating the significance or priority of each symptoms of LD as per their contribution in representing the knowledge contained in the dataset. Each symptoms significance or priority values reflect its relative importance to predict LD among the various cases. Then by eliminating least significant features one by one and evaluating the feature subset at each stage of the process, an optimal feature subset is generated. For comparative analysis and to establish the importance of rough set theory in feature selection, the backward feature elimination algorithm is combined with two state-of-the-art filter based feature ranking techniques viz. information gain and gain ratio. The experimental results show the proposed feature selection approach outperforms the other two in terms of the data reduction. Also, the proposed method eliminates all the redundant attributes efficiently from the LD dataset without sacrificing the classification performance.



## Chapter 5

# LOCOMOTOR DISABILITY



## **Diabetic Foot Ulcer and Its Orthotic Management**

Verma Pravin, Thomas Simon and Verghese Mathew (2005).  
Journal of Rehabilitation Council of India, 1(2).

### **Abstract**

The past two decades have seen an increase in the number of people diagnosed with diabetes worldwide. The World Health Organization warns that without primary intervention to reverse the trend, diabetes is projected to become one of the world's main disablers and killer within the next 25 years. A recent study in diabetes care reported that the number of adults with diabetes in the world would increase from 135 million in 1995 to 300 million in 2025. The majority of cases will occur in developing countries. Developed countries will experience a 42 per cent increase of diabetes cases, from 51 million to 72 million. In developing countries, the number of cases of diabetes will increase 170 per cent, from 84 million to 228 million.

## **Orthoprosthesis for Partial Foot Amputation (Chopart Amputation)**

Verma Pravin, Sunil and Varghese Mathew (2005). Journal of Rehabilitation Council of India,1 (1).

### **Abstract**

Foot amputations have been always difficult to manage for the surgeon, Prosthetist and Orthotist. In the early days it was thought that the more proximal level of amputation, the more difficult is walking, the prosthesis especially designed to solve this problem.

## **A Case for World Class Rehabilitation Centre for Spinal Cord Injury in India: A Critical Study**

Mehta Ketna L. (2006). Journal of Rehabilitation Council of India, 2 (1-2)

### **Abstract**

India has the second highest population in the world. Coupled with this burgeoning population we have high incidence of poverty and diseases. Quality of life of people is directly linked to quality of healthcare services available. Healthcare is provided in India by government, municipal and private hospitals, nursing homes and clinics. India is poised to become a hub for medical tourism in the near future. Healthcare is the fastest growing sector, growing at the rate of 13-15 per cent per annum and is estimated a Rs. 1,50,000 crores industry. No doubt we have high number of qualified doctors and para-medical faculty. Somehow, rehabilitation and post-hospital care has not been given the status it deserves. This article highlights the need for specific quality rehabilitation services in India with a focus on Spinal Cord Injury. Spinal Cord Injury leads to break up in the line of communication between the brain and the muscle due to damage to the Spinal Cord, leading to either Quadriplegia (Paralysis neck down) or Paraplegia (Paralysis waist down). It significantly alters every aspect of a person's life. The article compares the western countries like USA and UK, etc. regarding to the rehab centers models prevalent there and the need to replicate the same in this country.

## **A Comparative Study of Static and Dynamic Wrist Hand Orthoses for Hand Function in Adults with Tetraplegia**

Vidhupriya K.K. and Ranga Sharad (2010). Journal of Rehabilitation Council of India, 6 (1 & 2).

### **Abstract**

Splinting of the hand in the management of tetraplegia is a well accepted therapy intervention and has been an accepted practice for many years in the management of spinal cord injury. Even though splinting and orthotic fabrication is an accepted practice, there is minimal research data on the effectiveness of the intervention. This study measured the gain in hand function during a 21-day rehabilitation period in 30 persons with C6-C7 incomplete tetraplegia, 15 of whom wore a dynamic and 15 wore a static orthosis. Hand functions were measured in all subjects 0 day and 21 day of intervention. The result showed a significant difference in hand function between the groups.

### **Locomotor disability in bancroftian filarial lymphoedema patients**

Das L. K., Pani S. P. and Supriya K. Vinod (2008). Journal of Communicable Diseases, 40 (1), 13-19

### **Abstract**

Disability prevention in cases with lymphatic filarial disease has been a research priority in view of the current programme on global elimination of lymphatic filariasis. This is also important for estimation of disease burden, impact evaluation, developing strategy for morbidity management and rehabilitation for lymphoedema patients in the endemic countries. In this communication, we are presenting the results of quantification of functional limitations of lower extremities with lymphoedema caused due to bancroftian filariasis by objective assessment of movement of joints and power of muscles in the affected legs. A total of 81 consecutive lymphoedema patients attending a filariasis clinic in Pondicherry urban locality were recruited for the study. Assessment for restriction of movement of joints and

loss of power of muscles was carried out as in Manual for doctors to evaluate permanent physical impairment, prescribed by an expert group of WHO and Ministry of Health, Govt. of India on evaluation for permanent disability. Of the cases assessed, 40% in grade-I, 55% in grade-II, 77.3% in grade-III and 94.7% in grade-IV lymphoedema cases had functional limitations either in joint movements or power of muscles or both. The effective loss of locomotor/function (combined loss of joint movement and power of muscles in %) increased with stage of lymphoedema (grade-I-4.3+7.4, grade-II-7.0+8.4, grade-III-15.4+14.8 and grade IV- 33.2+22.8). The degree of loss varied significantly between the grades ( $P < 0.0001$ ). The methodology used in this study can be adapted to evaluate the impact of the morbidity management component of strategy for Elimination of Lymphatic Filariasis (ELF) programme. This study will also enable researchers for fine-tuning the method for estimating disease burden and, to develop and evaluate strategies for morbidity management/rehabilitation of filarial lymphoedema

### **A Study of Permanent Physical Disability Pattern in Motor Vehicle Accident Cases Presenting at SMS Hospital, Jaipur during the Year 2012-2013 a Prospective Study**

Meena, Dharmendra Kumar; Punia R K; Dutta Sumant; Verma R K; Diania N L (2015). Indian Journal of Forensic Medicine and Toxicology, 9(1), 68-72

Worldwide motor vehicle collisions lead to death and disability as well as financial costs to both society and the individuals involved. The maximum numbers of disabled people as a consequence of motor vehicle collision in our study were in 21–30 years age group (30.3%) followed by 31–40 years (24.6%) and 41–50 years (15.7%). Majority of the disabled people were

literate constituting 85.43% of total cases. Majority of the disabled persons in our study were persons engaged in the private sector (49%) and about 20% of the disabilities were found to have occurred in students. Majority of the disabled persons were on motorized two wheelers (66.6%) followed by 22% pedestrians. Among the 350 disabled people, majority of the people suffered locomotor disabilities (88.57%) followed by visual (4%); hearing disability (3.15%) and speech disability (2.28%). The aim of this study to evaluate the level and patterns of disabilities resulting from traffic injuries among the study population as well as its distribution by age, gender and type of motor-vehicle user.

### **Profile of Road Traffic Accidents in Rural Area of South-West Madhya Pradesh**

Singh Prabhsharan and Verma Sushil Kumar (2015). Indian Journal of Forensic Medicine and Toxicology, 9(1), 122-127.

Road traffic accidents (RTA) are among the leading cause of morbidity and mortality worldwide and will be the second most common cause of disability-adjusted life years in developing countries by the year 2020. A five year retrospective study of road traffic injury cases was conducted at the newly established Index Medical College Hospital and Research Center Indore M.P. A total of 596 medico-legal cases were studied, accidents 484(81.20%) accounted as the major cause of all incidences and road traffic accidents 362(60.7%) alone constituted the majority. Out of the 362 cases of RTA, 282(79.9%) were male and 80(22.1%) female victims with male to female ratio of 3.5:1. Highest number of victims, 120(33.2%), belonged to 21–30 years age group. Month of April recorded the maximum cases 48(13.2%), the most common time interval of accident remained 1601–2000 hours and included 139 (38.4%) of cases. Ninety (24.9%) cases had hospital stay of under 24 hours, 243(67.1%)

were discharged after satisfactory management. Two-wheelers use was the most common mode of injury 217(59.9%) and also the most common means of victim being hit 123(34%). Head and neck region with 140 (38.7%) cases, was the most common part of the body involved in road traffic injury; 47% of the males and 23.8% of females in the study suffered fracture and 53% of all fractures involved the lower-limb.

## **Evaluation of Quantum of Disability as Sequelae of Electric Burn Injuries**

Lunawat Ajay, Datey Sanjay M, Vishwani Avinash, Vashistha Rishikant and Singh Vikramaditya (2015). Journal of Clinical and Diagnostic Research, 9(3), 1-4.

### **Abstract**

Background: All will agree that invention of electricity has changed the world. Today nobody can think of living without an uninterrupted supply. Electricity is definitely a boon to the mankind but this turns into a curse when it becomes a cause of disaster. Electrical burn injuries are the most destructive injuries with a potential of causing significant functional disability and extensive disfigurement in the survivors. Materials and Methods: We carried out a retrospective observational study on the 110 patients of electric burns admitted to our hospital between January 2007 and October 2014. The aim of the study was to determine the demographic and clinical profile of patients who had sustained electrical burn injury, with a special emphasis on limb loss. Section-2 of Workman's Compensation Act 1923 was used for the calculation of an individual's disability due to amputation. All the data was analyzed using method of simple percentages and presented in a tabular form. Result: Forty eight patients (43.63%) of electric burn belonged to the age group of 21-30 years, with male preponderance (M:F:: 93.6 : 6.4). This shows

that the individual affected more often are invariably the breadwinners of the family. Twenty four, out of these 110 patients have undergone one or more than one amputation. Significantly the numbers of upper limb amputations have exceeded any other amputation in this study. Mortality in patients of electrical burns is 6.36% in comparison to mortality of 45.67% in all burn patients. Conclusion: Loss of upper limb completely reduces the earning capacity of an individual. Future and fortune of the individual's family is jeopardized. Such accidents can be prevented by following safety norms and simple precautions while using the electrical equipment.



## Chapter 6

# MENTAL ILLNESS



## **Effects of Paid Work Assignment on Psychosocial Functioning of Hospitalized Chronic Schizophrenic Patients**

Kumar S. and Mohanty S. (2012). Journal of Rehabilitation Council of India, 8 (1 & 2).

### **Abstract**

A deficit in psychosocial functioning is a core feature of schizophrenia. Poor social interaction, difficulties in mainstream relationships with family and friends, and/or inadequate performance in the workplace is the major factor leading to social exclusion. The present study explored if paid work assignments can improve psychosocial functioning of hospitalized chronic schizophrenic patients. 200 chronic schizophrenic patients were allocated to two groups (a) Experimental (n=100) from in-patients of institute of Mental Health and Hospital Agra. Between group repeat measures design was used in this study. Both the groups were engaged in various activities but a token payment was made to only experimental group. Dysfunctional Analysis Questionnaire (DAQ) was administered to measure the psychosocial functioning. The results revealed significant contribution of paid work assignment in improving psychosocial functioning. The pattern of longitudinal assessments revealed that both the groups had improved but the paid group had greater improvement.

## **Mental Illness as a Disability? Assessment and Management**

Ramaprasad Dharitri and Kalyanasundaram, S. (2009). Journal of Rehabilitation Council of India, 5 (1 & 2).

### **Abstract**

The psychological and social approach to understanding physical disability has made long strides. There has been a conscious effort in the field of physical rehabilitation to understand how a person is affected by the disability and how the person with the disability affects and is affected by his or her social and psychological environment. However, understanding disability due to mental illness has always taken a back seat and neglected or ignored by both professionals and policy makers alike. The newly emerging information on psychological and social aspects of psychiatric disability brings to light the necessity for addressing the needs of persons with psychiatric disability. In India mental illness was included in the Persons with Disability Act only in 1995, which is yet to be effectively implemented. Disabilities caused due to mental illness are not very conspicuous but affects almost all spheres of life. There is an urgent need to understand and address the needs of persons with disability due to mental illness. The present paper is an attempt to understand the nature and extent of disabilities caused due to mental illness.

### **The Role of Family, Society and Culture: A Collaborative Perspective on Management and Rehabilitation of Individuals with Mental Illness**

Duggal Prerna and Singh Tej Bahadur (2008). Journal of Rehabilitation Council of India, 4(1&2).

### **Abstract**

In this review article an attempt has been made to highlight the present need to collaborate mental health services with the familial and socio-cultural resources for achieving the management and rehabilitative goals. Additionally, the article contends the bilateral implications of this relationship where the mental illness has an

impact on the family and the society at large. The article continues by considering the extensive research that has been done in the area of community mental health and rehabilitation. The following discussion emphasizes the paradigm shift that has taken place with respect to families; formerly seen as etiological agents are now recognized as potentially important partner in the rehabilitative process. Furthermore, there is a focus on the issues prevalent in the Indian society that may act as barriers in the management process. The article also brings forth the cultural implications in the formation and manifestation of psychopathology and thus stresses on the need for culturally sensitive clinical care for the patients. In conclusion, the article calls attention to the pressing need to collaborate the family and socio-cultural assets in the prevention, treatment and rehabilitation of the mentally ill. As is known, besides biological and individual psychology, factors like family, society and culture also play a significant role in the formation of an individual's psyche; thus, it becomes essential to understand how these factors relate to the concepts of mental health and illness and their relevance in achieving the rehabilitative goals. However, one cannot have a unidirectional approach for understanding this relationship. It is not only an individual who gets affected by these factors but even the mental illness has an impact on the family and on the society at large.

### **Disability certificates in India: a challenge to health privacy**

Mishra N N, Parker L S, Nimgaonkar V L and Deshpande S N (2012). Indian Journal of Medical Ethics, 9(1).

#### **Abstract**

A “disability certificate” is necessary to access benefits afforded under the Persons with Disabilities Act (1995) in India. This

paper analyses this requirement and concludes that it constitutes a major challenge to maintaining privacy of health information especially for persons with mental health disabilities in India and recommends modifications in the certificate's format and use, to reduce the magnitude of privacy infringement for those using the disability certificate to access benefits to which they are legally entitled.

### **Issues related to disability in India: A focus group study**

Pal Hem Raj et al (2000). National Medical Journal of India, 13 (5), 237-241

#### **Abstract**

**Background:** Systematic research into disability has been scarce, especially from India, even though an estimated 5% of the population may have significant disability due to physical disorders. Depression as a common psychiatric disorder affects about 3%-5% of the population. Thus, the impact of disability related to physical, mental and substance use disorders is enormous and it influences resource allocation and policy planning.

**Methods:** The issues relating to disability were addressed through a qualitative multi-centered study. Focus groups were conducted at three sites in Chennai, Bangalore and Delhi on three themes: (i) parity, stigmatization and social participation; (ii) current practices and needs; and (iii) the General Disability Model as proposed by the World Health Organization. The focus groups were homogeneous and included members from six categories of participants: individuals with physical disability, individuals with mental disability, individuals with alcohol/drug-related disability, family members of mentally disabled persons, family

members of physically disabled persons and health professionals. In all, 118 groups were conducted with a mean (SD) group size of 8.6 (1.6).

**Results:** Patients with mental and alcohol/drug-related disability were more discriminated against than those with physical disability. Awareness regarding the existing laws and social programmes was uniformly poor across the three centres. Stigmatization was a major reason for under-utilization of the meager resources available. There was poor awareness of the Disability Act, 1996. The consumers felt more comfortable with the earlier terms of 'handicap' and 'impairment'.

**Conclusions:** The study has implications for policy planning, clinical decision-making and social behaviour. Awareness of the laws, facilities and programmes needs to be increased, especially regarding the Disability Act, 1996 among consumers as well as health professionals. More disability-friendly facilities are required.

### **Disability assessment in mental illnesses using Indian Disability Evaluation Assessment Scale (IDEAS)**

Mohan Indra et al (2005). Indian Journal of Medical Research, 121 (6), 759-763.

#### **Abstract**

**Background and Objective:** Psychiatric disorders cause disability in individuals and pose significant burden on their families. In most of the cases residual disability and poor quality of life continue even after disability evaluation in patients with chronic mental illness in very important. The present study was undertaken to assess and compare the disability in patients with schizophrenia

and obsessive-compulsive disorder (OCD) using Indian Disability Evaluation Assessment Scale (IDEAS).

**Methods:** Patients diagnosed to have schizophrenia and OCD with mild severity of illness were included in the study. Indian Disability Evaluation Assessment Scale (IDEAS) was applied. Disability was assessed in these patients on all domains of IDEAS.

**Results:** Majority of the patients with schizophrenia were from rural areas whereas most of the patients with OCD were from urban background. There was comparable disability in the patients with schizophrenia with duration of illness in the range of 2-5 yr and >5 yr. Significant disability in work and global score was seen in patients of obsessive-compulsive disorder with duration of illness >5 yr. Patients with schizophrenia had significantly higher disability in all domains than patients with OCD.

**Interpretation and Conclusion:** Schizophrenia causes greater disability than obsessive-compulsive disorder in patients. These illnesses affect all areas of daily functioning leading to greater disability, and thus increasing the burden on the family, pose greater challenge for the rehabilitation of patients and their inclusion in the mainstream of the family and society. Further studies on a larger sample need to be done to confirm the finding.

## **Treatment of mental illness in India**

Singh Akashdeep (2007). Canadian Medical Association Journal, 176(13).

### **Abstract**

Comments on an article by S. Kisely, M. Smith, and D. Lawrence on inequitable access for mentally ill patients to some medically necessary procedures. In India, the prevalence of major mental and behavioral disorders is estimated to be 65 per 1000 population, which translates to 70 million patients. The country's

mental health budget does not exceed 1% of total health expenditures. The National Mental Health Programme was implemented to provide services to rural as well as urban populations, but 80% of people in rural areas cannot access its services. Health and labor policy-makers, insurance companies and the general public all discriminate between physical and mental health problems.

### **From Mental Illness to Disability: Choices for Women Users/Survivors of Psychiatry in Self and Identity Constructions**

Davar B. V. (2008) Indian Journal of Gender Studies, 15(2), 261-290.

#### **Abstract**

This article traces the critical engagement of the women's movement with psychiatry, mental health and disability in India over the past two decades. Three phases can be discerned in this history. The first was a phase of radical intellectual disbelief about the very existence of mental illness as a valid knowledge category. In the second phase the experiential reality of women, who had to engage with their own emotional states, found expression in a variety of discourses about women and mental health. The marginalization of women by the mainstream medical sciences was addressed, and the right to care was redefined as the creation of gender-sensitive sciences. In the third and present phase I interrogate the paths we have taken in the creation of such gender-sensitive mental health practices. A mental illness language has been exhausted of any positive content. The rights orientation to mental health can be developed from disability thinking, which is providing an alternative vision for the world, as well for persons labeled mentally ill.

## **People with mental illness and human rights: A developing countries perspective**

Poreddi V, Ramachandra Reddemma K. and Math S. B. (2013), Indian Journal of Psychiatry, 55(2), 117-124

### **Abstract**

**Background:** Human rights violations among the people with mental illness were not an uncommon occurrence. The present study was aimed to compare persons with psychiatric illness and their caregivers' perceptions regarding the human rights status of people with mental illness in the community.

**Materials and Methods:** A descriptive design was carried out among randomly selected asymptomatic psychiatric patients and their caregivers (N=200) at a tertiary care center. Data was collected through face-to-face interview, using a structured questionnaire. Data was analyzed and interpreted using descriptive and inferential statistics.

**Results:** Our findings revealed that the caregivers than psychiatric patients perceived negatively to the statements i.e., 'Receiving equal information and encouragement about career opportunities' ( $\chi^2 = 10.779$ ,  $P < 0.029$ ), 'Opposing discriminatory actions, slurs' ( $\chi^2 = 9.472$ ,  $P < 0.050$ ) 'Resolving the conflicts with people with mental illness through nonviolent ways' ( $\chi^2 = 27.091$ ,  $P < 0.000$ ), 'Responding to the complaints of harassment or discrimination against the people with mental illness' ( $\chi^2 = 18.697$ ,  $P < 0.001$ ), 'Encouraged to continue their education' ( $\chi^2 = 13.029$ ,  $P < 0.023$ ) 'Exploitation by the community members' ( $\chi^2 = 18.653$ ,  $P < 0.001$ ) and working under fair conditions ( $\chi^2 = 13.470$ ,  $P < 0.009$ ).

**Conclusion:** The study suggests that there is an urgent need to take necessary steps to protect, promote, and fulfill human rights of people with mental illness through providing care, educating the community, and strengthening the legislations.

## **Mental Health Concerns for Indian Women**

Basu Sarah (2012). Indian Journal of Gender Studies, 19(1), 127-136.

### **Abstract**

This article studies the mental health problems of women, especially in the Indian context. As per World Health Organization (WHO) estimates, depression is expected to be the second largest contributor to disease burden by 2020, and with one in every three women worldwide being afflicted by common mental disorders including depression, the mental health of women is a serious issue indeed. While studying the psychological construct of mental health, we come to understand that it is deeply embedded within an individual's social and socio-economic relationships. Since women worldwide, and more so in India, face gender-based discrimination at every stage of their lives, their psychological well-being becomes a cause for great concern. This note attempts to explore the various risk and protective factors affecting the mental health of women. Considering the gravity of the matter, urgent remedial measures such as understanding the underlying causes of psychological distress among women, adopting a gender-sensitive approach, working towards women's empowerment and formulating women-friendly health policies could work wonders for the mental health of Indian women.

## **Prevalence of Mental Disorders among School Children in Kashmir Valley**

Paul Mohd. Altaf (2014). Ph.D. Psychology thesis, Jamia Millia Islamia, New Delhi

Supervisor: Prof. (Dr.) Waheeda Khan

## **Abstract**

**Background:** Mental Health of children has great importance and is affected by many factors. In Kashmir, the ongoing political violence has been a major contributor in the deterioration of mental health. The prevalence studies conducted so far on mental disorders in children of violence affected areas have given varied results and no such study has been conducted on children of Kashmir. Hence the present study was designed to study the nature, distribution and prevalence of mental disorders across various socio-demographical variables among school children in Kashmir valley. **Method:** The present study was an exploratory research in nature with multi-stage sampling and multi-informant reporting of mental health problems in children. A sample of 1000 school children with equal number of males (n=500) and females (n=500) were included in the present research. A list of schools in the district of Shopian was collected and twelve schools were randomly chosen. In every school, students of class 5th to 8th comprising of both male and female sections were selected through systematic random sampling method. Data was collected at different levels of screening by using Strength and Difficulties Questionnaire (SDQ) (Teacher form) and Mini International Neuropsychiatric Inventory (MINI-Kid). Socio-demographic data sheet was included to gather relevant information. Data was analysed by using Mann Whitney U Test, Kruskal Wallis test, Stepwise multinomial logistic regression and chi square test. **Results:** The prevalence rates of mental disorders among school children were presented at different levels of screening. It was found to be 27.1% (95%CI 24.18 - 30.02) based on SDQ and 22.2% (95%CI 19.28 ? 25.12) when assessed by MINI-Kid at second level of screening. However 10.81% (95%CI 7.89 ? 13.73) were also found potential out of 5% of non potential cases (729) when screened by MINI-Kid. Therefore, overall prevalence rate of mental disorders was increased by 33% (95%CI= 30.08 ? 35.92), when positive cases of 5% non potential sample were

included. Distribution of students found potential on different subscales of SDQ shows conduct problems to be most common (N=185) followed by peer problems (N=134) and emotional problems (N=132). However 62 cases of hyperactivity and 84 cases with problem in prosocial behaviour were also observed. The most commonly found mental disorders were of anxiety (8.5%), followed by mood disorders (6.3%) and then behavioural disorders (4.3%). Prevalence of PTSD was found to be 1.3% while as dissociative disorders was found to be 1.2%. Although no case of alcohol abuse, eating disorders or psychosis was found. Conclusion: Percentage of children with mental disorders in Kashmir is much more than in other states of India. The political conflict in the state and lack of mental health facilities give rise to high prevalence rates of mental disorders. It highlights the urgency of immediate intervention and need of Mental Health Programmes for such affected children.

## **Prevalence of Mental Disorders among School Children**

Bhasin Ashima (2010). Ph.D. Psychology thesis. Jamia Millia Islamia University, New Delhi.

Supervisor & Co-supervisor: Dr. (Mrs.) Waheeda Khan and Prof. T.B. Singh

### **Abstract**

Child and adolescent mental health has been largely a neglected area in India. Researches in the area of child and adolescent mental health of rural and urban areas is negligible and epidemiological information gathered in this area cannot be generalized because of methodological limitations like small and non-representative samples, and the lack of standardized screening tools. Prevalence studies reveal the prevalence of clinically

significant child and adolescent psychopathology ranging from 1.56% to 35.5% in school going children. Surveys of individual psychiatric disorders and of incidence and period prevalence are yet to be conducted in this population of children. Looking into this perspective, current research work has been carried out in the area of Child Mental Health.

The present study was an exploratory research on school children which focused on the nature and extent of behavior problems (i.e. neurotic, antisocial and undifferentiated) and prevalence and diagnostic distribution of mental disorders across school, gender and socio-demographic variables like age, class, birth order, family type, parent's occupation and income. To begin with equal number of boys and girls of VI, VII & VIII standards were included in the sample of 1200 students, selected from both public and government schools (N=600 in each case). The tools used to collect data were Child Scale B2 (Teacher's Rating) developed by Rutter (1970), Childhood Psychopathology Measurement Schedule (Parent's Rating) developed by Malhotra and Chaturvedi (1984), Socio-demographic Information Schedule and Psychiatric Interview. The diagnosis was made on the basis of clinical interview, taking detailed clinical history and doing mental state examination by the researcher with the help of a trained psychiatrist using ICD-10 criteria. Data was collected in three stages. In the first stage of screening potential cases were identified using Child Scale B2. In the second stage, Childhood Psychopathology Measurement Schedule (CPMS) was administered on parents of potential cases identified at the first stage of screening followed by clinical interview, detailed case history, and Mental State Examination was conducted on the cases that were found morbid and psychiatric disorders were diagnosed following ICD-10 criteria. Further, 5% cases were randomly selected out of the sample of non potential cases (i.e. 864) and CPMS was administered followed by psychiatric interview. The data were analyzed by (a) calculating percentages

and by applying chi square test to study the differences across school, gender and socio-demographic variables, (b) binary and multinomial logistic regression was applied to study risk factors in each group (c) comparisons on various factors of CPMS were studied by using Kruskal Wallis test and (d) significant pair wise comparisons were further evaluated by Mann Whitney U test.

After the first stage of screening, 28% cases were found potential, public school children showed more characteristics of antisocial behavior whereas in govt. school children undifferentiated i.e. mixed type (neurotic and antisocial) behavior problems were more prevalent. Females exhibited more characteristics of neurotic behavior whereas males showed more antisocial behavior. Multinomial logistic regression analysis showed significant results for three categories of behavior problems (neurotic, antisocial and undifferentiated) i.e. (i) ?type of school? was observed to be significant risk factor in govt. school children in terms of 3.57% times more at risk to be neurotic than public school children (ii) ?gender?, ?age? and ?school? were significant risk factors in males in terms of 2.82% times more likely to become anti social than females, govt. school children were 1.48 % times more likely to suffer from antisocial behavior problems than public school children and higher the age higher is the risk of becoming antisocial (iii) ?type of school? was significant risk factor i.e. govt. school children exhibited undifferentiated behavior 2.60 % times more than public school children.

At the second stage of screening, 5.75 % children had psychopathology and males and govt. school children were the most affected one. Significant differences were observed across ?gender? and ?school? groups on the CPMS factors of depression, special symptoms and conduct disorder with (a) females in govt. schools showing maximum manifestation of special symptoms, (b) govt. school males exhibiting more conduct disorders, (c) govt. school females showing more depression and special

symptoms as compared to their counterparts in public school and males as well. At the third stage, overall prevalence of psychiatric morbidity was 5.4%, it was 1.75% and 3.67% in public and government schools respectively; 3.42% and 2% was the rate of prevalence among boys and girls respectively. It was found that (a) among government school children enuresis, substance abuse, ADHD, conduct disorder, social phobia and adjustment disorder were the most prevalent disorders while among public school children, mild mental retardation, dissociative disorder, sleep walking, panic attack with agoraphobia and somatisation disorders were observed (b) enuresis was the highly prevalent psychiatric disorders among boys, followed by sleep walking, insomnia, substance abuse, adjustment disorder, social phobia, ADHD and conduct disorder; mild mental retardation and sleep disorder (night terrors) were more prevalent in girls. Enuresis was the most prevalent disorder followed by substance use and ADHD. 5% cases selected randomly out of the non potential cases yielded 43 (6.9% ) cases to be potential.

On socio-demographic variables, comparisons showed that mental disorders were manifested more among children who were youngest in birth order followed by 11 years old and those who belonged to nuclear family, service class parents and low income families. However, no other socio-demographic variable yielded significant results. Low prevalence rate in this study, as compared to other epidemiological studies could be explained on the basis of the methodological considerations which led to a refinement of screening procedures. In view of above findings it was concluded that it is highly imperative that epidemiological studies should start early in childhood and be carried longitudinally for years, so that better preventive, curative and rehabilitative care could be provided in early stages of child development. Thus it can promote positive health in children sustained through a comprehensive approach adopted in primary health care system.

## **A Review of Mental Health Care Bill 2013**

Udayashankar, Y. (2015). Indian Journal of Forensic Medicine and Toxicology, 9(1), 56-60.

Michelle Funk, coordinator of Mental Health Policy and Service Development at WHO's Department of Mental Health and Substance Abuse commented: "Too few people with mental disorders and psychosocial disabilities in India have access to good quality mental health care, and too many within the system have experienced extensive human rights violations, including inhumane and degrading treatment, restraint, seclusion, physical, sexual, or emotional abuse, and neglect". United Nations Convention for Rights of Persons with Disabilities (UNCRPD) was adopted in 2006, which marks a paradigm shift in respect of disabilities (including disability due to mental illness) from a social welfare concern to a human right issue. The new paradigm is based on presumption of legal capacity, equality and dignity. Following ratification of the convention by India in 2008, it became obligatory to revise all the disability laws to bring them in harmony with the UNCRPD. This article discusses important salient features of the newly introduced MHCB 2013 and the background of its presentation and its purpose.



## Chapter 7

# MENTAL RETARDATION



## **The Effect of Training Siblings on the Academic Achievement of their Siblings with Mental Retardation**

Grover Usha (2005). Journal of Rehabilitation Council of India, 1 (2).

### **Abstract**

Over the years, family oriented services have gained in importance over child-oriented services, in the education and rehabilitation needs of persons with mental retardation. In the present experimental study, the siblings of children with mental retardation comprise the target group for observation and inferences. The siblings were trained, in the functional areas selected by the investigators, and they in turn trained their brothers/sisters with mental retardation. It was found that there was a significant effect of the siblings training programme on the total academic achievement of children with mental retardation. It was also observed that the understanding level of the siblings of children with mental retardation on the nature, cause and management of persons with mental retardation increased significantly.

## **Effect of Music Therapy on Mentally Retarded Children: An Observation**

Gupta Madhu and Jain Manju (2005). Journal of Rehabilitation Council of India, 1(1).

### **Abstract**

Music plays a major role in the every day and special day lives of most of the people. It is much a part of them as the rhythm of their heartbeat. Many hyper-active students, speech problem students, problematic children, slow learners, mild, moderate and

severely retarded children, early childhood children could learn something from the use of music in the class room; as music reaches, teaches, and reinforces all children in a variety of way. In the present study, severely retarded children have been observed responding motorically to music when other stimuli failed to elicit observable responses. Mild retarded children have been observed reciting the alphabet with little or no difficulty when it was taught rhythmically. Music education can be employed as a means of improving the academic achievement and social adjustment of mentally handicapped children so that they feel themselves a part of the society. Therefore, music should be used in the mainstream of education as an instructional technique.

### **Education of the Mentally Handicapped : Problems and Prospects**

Majumdar Smita and Sen A.K. (2000). Indian Journal of Psychological Issues, 8(2).

#### **Abstract**

The present paper attempts to summarize the various methods which have been developed and are being used for teaching the 3R's (reading, writing and mathematics) of education to individuals with mild mental retardation. The paper attempts to focus on the various cognitive deficits present in mentally challenged children and as well as on the different techniques that have been developed to overcome them so as to foster effective learning, thus providing them the opportunity to adapt and to be absorbed in various occupational and social spheres.

### **Understanding Educational Needs of Mentally Retarded Children**

Varma Charu and Prasad S.K. (2010). Social Research Journal, Past Present & Future, 3(2).

### **Abstract**

The principle of inclusive education was adopted at the World Conference on Special Needs Education Forum (Dakar, Senegal, 2000). Inclusive education provides the best solution for a school system which can meet the needs of all learners. School must ensure opportunities for participation and sharing through a wide range of working methods and individual treatment. Their needs should in principle be met in the regular school system. A decisive issue is that of how the individual pupil can be ensured optimal education in accordance with his/her capabilities and needs. We must take these concerns seriously and dispel them by showing examples of positive issues in education. With this aim a Case Study on NGO run School 'Kulachi Hansraj Manovikas Kendra' – A School for children with Special Children, was undertaken and is being presented in this paper. KHMS through dedication, perseverance, courage and conviction have done and is doing best in caring and rehabilitating children with disabilities in the main stream of society. They put all efforts to prepare them for normal growth and to enable them to face life with courage and confidence.

### **Effect of Computer Assisted Instruction on Addition Skills Among Adolescents with Mild Mental Retardation**

Choudhary Mahesh Kumar (2012). Journal of Rehabilitation Council of India, 8(1 & 2).

### **Abstract**

In this present study pre-test control group design is used to examine the "Effect of Computer Assisted Instruction (CAI) on Addition Skills Among Adolescents with Mild Mental Retardation". Non-probability purposive sampling technique is

used to select the sample. Total ten samples selected for the study, which were divided into experimental and control group of five in each. Pre-requisite Checklist for Computer Operation and Additional Skills (PCCOAS) was used for selection of sample and Addition Skills Checklist (ASC) was used for pre and post test evaluations and NIMH Numeracy package was used for giving intervention to the experimental group for twenty sessions. Statistical treatment of data was done by using mean, standard deviation and t-Test. The findings revealed that the post-test score of both experimental and control group is higher than the pre-test score, however, the post-test score of experimental group is significantly higher than the control group.

### **Mental Stress of the Parents of the Children with Mental Retardation: A Study**

Shah Rita H. (2007). Journal of Rehabilitation Council of India, 3(1 & 2).

#### **Abstract**

Due to constant touch with Mentally Retarded Children of “ANKUR” special school for the mentally retarded children, Bhavnagar, the author could know that the parents of Children with mental retardation are in constant grip of disappointment and are worried about present as well as future problems of their children.

This appears to create acute mental stress among the parents, which has its adverse effect on their family, social, professional and personal lives. The author felt need to study the causes, and nature of stress the result of which can be useful for future programmes of training/orientation of parents of Children with mental retardation (particularly at the “ANKUR” school where the said study is conducted). The research design is of a survey,

which used interview and questionnaire as data collection techniques. Conclusion and suggestions are also given at the end of the article.

## **Development & Evaluation of Child-Centred Curriculum for the Intellectually Challenged - An Action Research**

Malhotra Rita (2007). Journal of Rehabilitation Council of India, 3(1 & 2).

### **Abstract**

While working with children with special needs, it was thought that what is lacking in the Indian setting is a set of goal-orientated directions. Parents and teachers are at a loss about what to teach, when to teach and how to teach. A need was felt to develop a Curriculum cum Instructional Guide. This Curriculum cum Instructional Guide is the outcome of an Action Research Project carried out at Indra Vidya Child Guidance Clinic of Amar Jyoti Charitable Trust from 1992 to 2000. Children and special educators from several special schools of Delhi participated in this project – initially for selection of tools, establishing the efficacy of these tools and later on for field-testing. Incorporating the suggested modifications a Curricular-Action-Plan was drawn up for three levels - Elementary (2-10 years), Secondary (11-16 year) and Vocational (17 years and above). It covers five areas i.e. (i) Assessment (ii) Record-Keeping (iii) Programme-Planning (iv) Child-Centred-Curriculum (v) Ecological Relevance, for all three levels. The Developmental Version of Curricular – Action-Plan (CAP) was sent to 60 experts for their comments and ratings on a five point rating scale for each level separately. 40 experts returned the feedback format.

The Curricular – Action-Plan (CAP) can provide necessary curriculum modifications for intellectually challenged children placed in regular schools. CAP can also assist the teachers of general schools if they have a child in their class who has difficulty in following the regular curriculum. Individualized educational programme can be developed through assessment on CAP.

### **Impact of Individualized Educational Programme for Improving Functional Skills of Children with Mental Retardation**

Gupta Madhu and Sindhu Suman (2007). Journal of Rehabilitation Council of India, 3(1 & 2).

#### **Abstract**

The present study is an attempt to study the impact of Individualized Educational Programme for improving functional skills of children with mild and moderate mental retardation. It is a multiple case study wherein 4 cases are studied using Pre-test and post-test design. At the stage of pre-test, functional skill areas viz. motor-skills, activities of daily living, language skills, reading, writing, number, time, domestic, social skills, pre-vocational and money skills of each mentally retarded child were assessed with the help of 'Behavioral Assessment Scale for Indian Children with Mental Retardation' (BASIC-MR). Based on that assessment in each skill area, a systematic Individualized Educational Programme was developed for each child and implemented for three months. At the stage of post-test, each functional skill area was again evaluated and recorded in BASIC-MR. The parents of the subjects were also guided to follow the educational programme at home to improve the skill behavior of their wards appropriately in time. They were encouraged to discuss the progress of their children once a week. It was found

that Individualized Educational Programme in functional skill areas, if initiated and followed up on regular basis, can improve the skills of the child effectively.

### **Biological and Psycho-social Predictors of Developmental Delay in Persons with Mental Retardation: Retrospective Case File Study**

Persha A. (2006). Journal of Rehabilitation Council of India, 2(1-2).

#### **Abstract**

Mental retardation is one of the commonest disabilities during the developmental period. It is often associated with several factors. The present study was designed to identify the biological and psycho-social factors associated with developmental delay resulting in mental retardation. The study consisted of reviewing of 438 case files of persons with mental retardation. Results indicated that maternal age at conception, fetal presentation, neonatal seizures and infections were the best indicators of developmental delay characteristic of mental retardation. Psycho-social variables such as emotional trauma during pregnancy, economic status and education of parents had no significant impact on development.

### **Effect of Yoga Therapy on Persons with Mental Retardation: An Observation**

Sindhu Suman and Kumar Mukesh (2006). Journal of Rehabilitation Council of India, 2(1-2).

### **Abstract**

A systematic planning, regular practice of Yoga therapy for the rehabilitation of persons with mental retardation may improve ones ability to pay attention to a task, may prevent further deterioration and may bring about cures of many of the problematic conditions. Systematic practice of yoga may result in correcting postures, reducing obesity, controlling dribbling, bringing down hyperactivity, improving appetite, sleep and general health. In the present study, Yoga therapy has been applied on a few cases of persons with mental retardation. Fruitful results were observed in improving level of their concentration, eye-hand coordination and controlling dribbling. Wonderful positive effects were found in decreasing/controlling hyperactivity and aggressive behavior through regular training and practice of yoga by including in the curriculum in special schools. It also improved the self-help skills and enhances the confidence in participation among group.

### **Impact of Early Intervention Programme on Developmental Delayed Children**

Malhotra Sunita, Gupta Madhu and Mukesh Kumar (2006).  
Journal of Rehabilitation Council of India, 2(1-2).

### **Abstract**

Early intervention is defined as the introduction of planned programming deliberately timed and arranged in order to alter the anticipated or projected course of development. Stimulation at the early childhood stage involves efforts to activate the child's early development. It is more than a series of exercises; it is a continuous dialogue between the child and those who care for the child development, as a result of the close interaction between maturation and learning. Early intervention attempts at providing

learning experiences to the child so as to enhance his or her development. The learning experiences for stimulation are so planned that they are in accordance with the child's maturational level. Three cases (two mental retardation and one orthography multiplex congenital diseases) were observed and given training of early intervention programme. It was found that in all the three cases training strategies given during early intervention programme have positive impact on developmental delayed children.

### **A Study of Misconceptions Among the Parents Having Children with Mental Retardation in Relation to Demographic Variables**

Gupta Madhu, Kumar Mukesh and Jain Manju (2006). Journal of Rehabilitation Council of India, 2(1-2).

#### **Abstract**

The present study is an attempt to study the misconceptions of parents having mentally retarded children who are enrolled at various institutes of mental retarded located in Haryana 'NIMH-GEM QUESTIONNAIRE' was given individually to each parent to know his misconceptions about their mentally retarded children. The present study revealed that fathers, less educated parents and parents belonging to rural area having mentally retarded children have significantly more misconceptions than their counterparts.

### **Disability Impact on the Parents Having Mentally Challenged Children**

Kumar Mukesh (2009). Journal of Rehabilitation Council of India, 5(1 & 2).

## **Abstract**

In the present study two group designs have been used to assess the disability impact on the parents (fathers and mothers) having mentally challenged children.

For this purpose NIMH “Disability Impact Scale” was administered on the parents both fathers and mothers separately. This scale assessed the disability impact in eleven (11) different domains. The data was statistically analyzed by using t-test.

The results revealed that mothers of mentally challenged children were adversely affected in the area of health, support, social activities like attending social function, leisure/recreational activities; embarrassment from family, relatives and neighbours, etc. maintaining relations; sibling effects and specific thoughts. Whereas, positive impact area was enhanced (positively affected). As they displayed more patience, tolerance empathy and sensitivity.

Further, the fathers were negatively affected in the area of career, as readjusting time, taking up less paying jobs, seeking transfer, etc. However, the impact of disability upon both the parents was found to be equal regarding the finance and physical care. These results have been discussed in the context of patriarchal family scenario in the Indian context.

## **Assessment on Adaptive Skills and Educational Experiences among Mentally Retarded Students at Kodaikanal**

Evathi (2010). Journal of Rehabilitation Council of India, 6(1 & 2).

### **Abstract**

The purpose of the study was designed to explore Adaptive Skills and Educational Experiences of school students with Mental Retardation at Kodaikanal. The investigator has chosen survey method for this study. The investigator collected 70 samples (50 Mentally Retarded students and 20 Mentally Retarded teachers) from Kodaikanal Schools in Kodaikanal Taluk. The research extends it to assess how the Adaptive Skills and Educational Experiences differ among Mentally Retarded Students with regard to age, locality, type of school and level of retardation. The educational experiences may be because of instructional practices in general, vocational and non-vocational special education classrooms, participation of students in various settings, educational support services are accessible and adaptive skill training are being provided to mental retarded students. Thus these findings reveal that there is a relationship between Adaptive Skills and Educational Experiences among Mentally Retarded students at Kodaikanal. It may help the special educators to plan and implement the strategies to improve their adaptive skills.

### **Mentally Challenged Children through Psychological Approach**

Kumar, M., Sharma, D. and Gunthey, R. (2010). Journal of Rehabilitation Council of India, Volume 6(1 & 2).

### **Abstract**

For person with mental retardation access to vocational training and employment have been negligible throughout most of this country's history. Even today many Persons with Mental Retardation are employed or unemployed in spite of the dramatic increase in vocational research and development that has taken place in the 1970s and 1980s. Rao and Siva Kumar (2004)

emphasize that, in order to provide and expand a systematic vocational training and placement for the persons with mental retardation there is a need to provide proper vocational climate. In urban areas, the major threat to environment comes from air-pollution caused by the emission from petrol and diesel run vehicles. Heavily polluted air enters our lungs and causes irreparable damages to the health. A number of programmes and projects initiated and funded by the Government of India have been working to combat this menace, and these to an extent have been successful in controlling the environmental pollution. This research envisages twin advantages. On the one hand the environmental pollution will be controlled and curbed and on the other hand Person with Mental Retardation will be provided with some job which not only will help them monetarily, but will also enhance their self-image and self concept.

Objective of this research is to provide adequate training to the chosen Person with Mental Retardation in making chinks, paper bags and plantation of trees and enable these children to have a feeling that they are also part of mainstream. Five persons with Mental Retardation were selected on the basis of their mental age and psychomotor coordination.

Only those with a mental age were selected between 8 and 12 years. Rigorous and regular training of 4 hrs was given to them. In this training a series of demonstrations of construction of making chinks and the demonstration of making paper bag were given by the field experts. It is observed that there has been an overall development in self-confidence, self-recognition, self-evaluation and eye-hand coordination.

## **Screening For Fragile X Syndrome Among Neurobehavioural Patients From Kolkata, Eastern India.**

Bhowmik D.A, Dutta S, Chatterjee et.al (2009). Journal of Clinical and Diagnostic Research. (3), 1266-1273.

### **Abstract**

**Background:** Fragile X syndrome (FXS), associated with abnormal functioning of the FMR1 gene, is a major cause for inherited mental retardation (MR). The symptoms which are commonly associated with FXS are also observed in patients suffering from various neuropsychiatric disorders like autism, epilepsy, seizure disorder etc. Thus, the diagnosis of FXS that is solely based on a patient's physical and behavioural characteristics is very difficult. To avoid a false positive diagnosis which is crucial for better management of the disorder, screening for FXS with easy diagnostic tools becomes extremely important. **Aims:** In this study, screening for FXS was carried out among 157 various neurobehavioural patients attending the out patients department of Manovikas Kendra, Kolkata. **Methods and Material:** To screen the level of functioning of the FMR1 gene, the percentage of leukocytes expressing the fragile X mental retardation protein (FMRP) was measured by an immunocytochemical method. CGG repeat size was analyzed by PCR amplification and FMR1 promoter methylation status was checked by methylation sensitive-PCR.

**Results:** Out of 157 patients recruited for this study, only four were confirmed as FXS (3.18% prevalence among neurobehavioural outpatients). 30 distinct alleles with 12-49 CGG repeats were detected, with the 27 and 28 repeats being most common. Premutation alleles were observed in 25 subjects. Molecular biology-based analyses confirmed 5 cases as FXS; four patients were detected with promoter methylation mosaicism

and one with full methylation. Conclusion: In the present investigation, FXS screening was performed on various neurobehavioural outpatients and four were confirmed with the disorder. The CGG repeat alleles that were most frequently observed in this study were different from those found in other studies, indicating a racial or ethnic variation.

## **Determinants of Quality of Life of Family Caregivers of Children with Intellectual Disabilities and Autism**

Malhotra Shahzadi (2014). Ph.D. Thesis, Department of Psychology, Jamia Millia Islamia University, New Delhi.

**Supervisor** : Prof. Waheeda Khan

**Co-Supervisor** : Prof. M.S. Bhatia

### **Abstract**

Background: Providing the high level of care necessary to a child with long-term functional imitations causes much stress on the caregiver which in turn affects the quality of life (QoL) of the family caregivers, especially parents. The present research was designed to study the QoL of family caregivers of children with intellectual disability (ID) and autism. Further, dimensions of parenting stress and types of coping were studied as the possible determinants of the QoL.

Method: A four group study was done. The sample was purposive and consisted of 200 caregivers i.e 50 mothers and 50 fathers having children with ID (n = 100) and autism (n = 100) in the age range of 5-12 years. The caregivers' age range was between 30 to 45 years and minimum education level was 12th grade. The children were diagnosed as per ICD-10 DCR criteria. In

addition, the diagnostic assessment was also based on Seguin Form Board Test, Vineland Social Maturity Scale and Childhood Autism Rating Scale. The parenting stress, types of coping and QoL were assessed using Parenting Stress Index, Ways of Coping Questionnaire and WHOQoL-BREF Scale. Obtained data were analysed using SPSS (version 17.0) using t-test and Multiple Regression Analysis (Enter method).

Results: Mothers of children with ID have lower physical and psychological QoL as compared to fathers of children with ID. Mothers of children with autism have lower levels of QoL as compared to the fathers of children with autism. Fathers of children with ID and autism engaged significantly more in self-control, accepting responsibility, planful problem solving and positive reappraisal as compared to the mothers of children in these two groups. On the other hand, mothers of children with ID and autism exhibited more confrontative coping and escape avoidance as compared to their counter parts. Beta values for various predictors showed that seeking social support was the most significant predictor of all the domains of QoL (variance ranged between 40% to 86%) except for psychological domain of mothers and the physical domain of QoL of fathers. The most significant predictor for psychological domain of QoL of mothers was the parent dimension of parenting stress (contributing 61% variance) whereas the physical domain of QoL of fathers was most significantly determined by planful problem solving (contributing 60% variance).

Conclusion: QoL of mothers is significantly lower than that of fathers having children with ID and autism. Parenting stress and types of coping are significant determinants of domains of QoL of family caregivers of children with ID and autism.

## **Health education needs of mentally retarded children, parents and teachers**

Joseph, Valsamma (2013). Ph.D. Thesis, Mahatma Gandhi University, Kottayam, Kerala.

Guide: Sukumaran, P. S.

### **Abstract**

This study investigated the knowledge of parents and teachers regarding general health education aspects, their perception on the health education needs of mentally retarded children, health status of these children, and it also examined how much health aspects are included in the curriculum for the training and education of these children and special teachers. The sample consisted of 200 mentally retarded children, their parents and 100 special school teachers. The findings of the study revealed that parents had only moderate knowledge on general health aspects whereas teachers possessed good knowledge. Both parents and teachers favourably perceived the need for educating mentally retarded children on general health education aspects. No significant difference was observed between perception of parents and teachers. Children with mental retardation are found to have good health status even though majority of them are below the NCHS standards for height and weight. Content analysis of the curriculum for the education and training of mentally retarded children and for the special teacher training programmes revealed that the coverage of general health education aspects were inadequate. The results are discussed and the implications and suggestions for further research are also given.

## **Personality traits and adaptive behaviours of the educable mentally retarded**

Joseph, Emmanuel. S (2014). Ph.D. thesis, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu.

Guide : Arockiasamy, S

### **Abstract**

Every person suffers from want of some abilities and every person with obvious physical, mental or emotional limitations is capable of some work or the other. World Health Organization (WHO) has distinguished between impairment, disability and handicap. Temporary or permanent disabilities can arise due to disease, accident, genetic disorder or any other reason. A variety of situations in life including the ageing process brings in its wake certain impairments. WHO defines impairments as any loss or abnormality of psychological, physiological or anatomical structure. Disability is an impairment that interferes with the functions expected at one's age and one's social environment. Disability may interfere with one's education or with one's work or with one's social interaction. A handicap is a disadvantage resulting from a disability. Disabled people constitute a substantial part of the community. No community can afford to allow such a significant number of people remain unproductive. Experience has shown throughout the world that combined with development in modern technology people with disabilities can be integrated into all spheres of social and economic endeavour. With right incentive, people with disability can become as useful and productive citizens as the rest.

## **Identification of a novel gene mid for intellectual disability and leads in additional families using next generation sequencing tools**

Thenral, S G (2014). Ph.D. Thesis. University of Delhi, Delhi.

### **Abstract**

Intellectual disability, also referred to as Mental Retardation (ID/MR) is the most common developmental disorder, with a prevalence of 1-3%, and represents an important health burden in the population. 50% of MR cases have a genetic basis of which 8-10% are X-linked (XLID) and majority are thought to be autosomal (AID) genes. In spite of the exponential increase in knowledge of the genetic aetiology, >50% of syndromic and non-syndromic forms of inherited ID remain unexplained and are thus potentially useful for novel gene identification. Using such XLID/AID pedigrees to identify novel loci/gene(s) for ID is the main objective of this study. To achieve the objective, four putative X-linked and informative families were analysed. F#1, 2 & 3 were screened systematically and ruled out for gross chromosomal anomalies and FMR1 mutation (the most common cause of inherited ID). Analysis of array CGH in probands from F #1 and 2 identified potential copy number variants which might underlie their disease aetiology. In Family #1, duplication of ~1.8Mb region at 2q13 previously reported to be involved in ID was observed in the affected sibs in one arm of the pedigree. In Family #2, duplication of ~0.5Mb genomic region at Xp11.4 encompassing BCOR, a known ID gene in all the three affected sibs was observed. However, in both these families additional experiments are warranted to confirm these findings. Family #3: Target resequencing of the significant linked region (Xq21-Xq24; LOD score of 3.5), followed by prioritization of the novel variants by in silico algorithms identified a missense mutation (Q9UJV3 p.Arg347Gln) in MID2, a gene hitherto unreported for ID, as the

likely cause of ID in this family. The mutation was observed in all affected and obligate carriers but not in any unaffected males of the family or in the population controls (n=200). When transiently expressed in HEK293T cell line, the mutation was found to abolish the function of the COS domain in the protein. The GFP tagged mutant protein accumulated in the cytoplasm instead of binding to the cytoskeleton resulting in altered sub-cellular localization. Screening of the coding exons of this gene in additional 480 unrelated individuals with idiopathic ID identified another novel variation p.Asn343Ser in one of the probands in the COS domain which was not present in controls. This study highlights the growing role of the ubiquitin pathway in ID and also, the difference in MID2 determined phenotype observed in this family compared to that of its paralogue MID1 reported in literature. Family #4 was diagnosed with Seckel syndrome. The role of known Seckel genes was excluded based on microsatellite markers and subsequent exome resequencing in an affected individual. Analysis of the novel variants from the genomic regions shared among the affected sibs in the family by sequential filtration and in silico prediction has revealed multiple putative candidates, whose validation is underway.

## **Efficacy of group intervention in the psycho social care of patients with epilepsy**

Jayachandran, D. (2013). Ph.D. Thesis. Mahatma Gandhi University, Kottayam, Kerala.

Guide : Kumar, K. A.

### **Abstract**

Epilepsy is a chronic brain disease with serious psycho-social complications. The psycho-social implications of epilepsy are more disabling than the seizures. Psycho-educational group

intervention as a novel approach for patients with epilepsy and their family members has been in practice in the Centre for Comprehensive Epilepsy Care, Sree Chitra Tirunal Institute for Medical Science and Technology (SCTIMST) in Thiruvananthapuram, Kerala, India for the past 17 years. Yoga-meditation (Pranayama) has also been practiced in this center for the past 4 years with proven efficacy in seizure reduction- Design: The study followed a prospective, randomized experimental research design involving two experimental groups (psycho-education and meditation) and a common control group. Tools used: Eight scales / inventories were used to assess the efficacy of the interventions. Of the eight scales, two scales namely: EPSES and QOLIE-31 are translated from English to Malayalam and standardized by the investigator using 440 patients with epilepsy (220 patients for each scale). Subjects for Experimental Study: Thirty six patients (20 males and 16 females), age range 16 to 35 years with an established diagnosis of epilepsy with at least two seizures during the past one year, Interventions: 1. Psycho-educational group sessions for patients with epilepsy and their family members. 2, Pranayama (Yoga- Meditation) for 20 minutes twice daily (morning and evening). Results: Out of the 28 dependent psycho-social variables tested with different scales / inventories there were statistically significant positive changes in more than half of the variables either in ANOVA or ANCOVA or in both in the Psycho-education group. Two variables (Trait and Total Anxiety) recorded significant change in Meditation group, which is another major finding of the study.

## Chapter 8

# **SPEECH AND HEARING IMPAIRMENT**



## **Study on Auditory Responses of Children with Hearing Impairment Using Individual Hearing Aid and Classroom Amplification**

Banik Arun and Pawar Tanaji S. (2005). Journal of Rehabilitation Council of India, 1 ( 2).

### **Abstract**

The study examines the auditory responses of the children with hearing impairment using individual body level hearing aids and hardware classroom amplification system in an educational set up. A sample of 50 subjects were divided into two group: (i) First group consisting of 25 children were fitted with individual strong class body level pseudo-binaural hearing aids, (ii) Second group consisting of 25 children who used hardwire group hearing aids system in the class room, were examined in the study. To obtain the auditory responses from the hearing impaired children using individual and group hearing aids in the schools, an auditory response kit consisting of (i) speech (word), and (ii) non-speech (environmental) sounds was constructed as a part of the study. The result suggests that hearing impaired children using hardwire classroom amplification system performs better to elicit auditory responses to the classroom when compared with the hearing impaired children using body level individual hearing aid system.

## **Stuttering as Related to Personality and Adjustment**

Prasad Sanjay Kant, Kirti and Kumari Poonam (2000). Indian Journal of Psychological Issues, 8 (2).

### **Abstract**

The present research was undertaken to investigate into the personality and adjustment factors in relation to functional stuttering. For measuring personality, Hindi standardized version (De and Thakur) of Eysenck Personality Questionnaire, and for measuring adjustment Hindi version (Mohsin – Shamshad) of Bell's adjustment Inventory were used. Twenty stutterers and twenty normal speakers were included as sample for the purpose. Sex, educational level and social background were controlled. The results indicated that experimental and control groups significantly differed in respect of neuroticism and extraversion in the personality side and in respect of such adjustment areas as home, social and emotional. The overall adjustment of the experimental group also significantly differed from control group. The results support the hypothesis that functional stutterers have underlying problems in relation to personality and adjustment.

### **Community Noise Levels in Kolkata and the Opinion of the Police**

Rout Nachiketa, Kumar Suman (2011). Journal of Rehabilitation Council of India, 7 (1 & 2).

### **Abstract**

The present study was aimed at understanding the noise level in Kolkata city and to examine if the noise levels were within World Health Organization (1999) guidelines and according to the Noise Pollution Act, 1986 prescribed by Government of India. The study was carried out by the two audiologists who recorded noise levels at fifteen locations in Kolkata between 8.30 a.m. and 6 pm (peak working hours). The B&K 2240 sound level meter was used in its A weighting network and a data sample (LA, LCpeak and LAeq) averaged for two minutes was recorded

at each location for analysis. In the second part of the study an interview of forty police men (twenty traffic and twenty general) posted at locations during data collection was analyzed. The questionnaire covered three different areas: the prevalent noise conditions, awareness about noise regulation rules and impact of noise on their health. The average noise level was found to be higher in commercial, outdoor and hospital area as compared to WHO (1999) Guidelines and Government of India Guidelines (1986). All the police men unanimously agreed about an increase in the noise level across the city, which affected their health. However they were not aware about any regulations governing noise pollution. The symptoms which were most frequently reported included a need to put the TV volume toward the higher end along with vocal fatigue and throat pain by the end of the day. The frequency of horns used is alarming on the Central Avenue, about one horn with an average intensity of 104.7dBA could be heard every 2-3 seconds. Most of the horns were used unnecessarily, i.e. on the emergence of the green light which warrants a need for an awareness program amongst the general public about noise and its effect on health.

### **A Study of Nature of Hearing Impairment of Children Enrolled as Children with Special Needs in Sarva Shiksha Abhiyan in the State of Bihar**

Banerjee Ankur Selvakumaran H, Kumar Suman, Chatterjee Indranil, Sinha Ashok Kr. (2007). Journal of Rehabilitation Council of India, 3 (1 & 2).

#### **Abstract**

Numerous studies are prescribed on the incidence of hearing loss in school going children. The national policy like SSA and inclusive education are just beginning to catch attention and have a long way to go. The majority of hearing impaired in rural areas

of India is left out without proper education – few get educated in special schools for students with hearing impairment. The objectives of the said research were to investigate the probable etiology of hearing impairment, to investigate the status of Middle Ear among the school going population and to study the hearing aids being used. A group of audiologists of AYJNIHH ERC Kolkata assessed 1427 students in age range 3 to 14 years from 10 districts stretched throughout Bihar for a period of 19 days. From the result we can see that sensorineural hearing loss is the greatest factor accounting for about 53% of total number of hearing impairment children. Middle ear and outer ear problems consist of 34-38% of the total number of hearing impaired. The study reveals that nearly 74% of the cases tested have obtained hearing aids. 30% of the cases got extra strong class v cord hearing aids and 23% of the cases were prescribed strong class v cord hearing aids.

### **Special Schools for the Deaf in North India: Profile of Principals and Teachers**

Randhawa Surinder P. K., Rastogi Renu and S. C. Handa (2007).  
Journal of Rehabilitation Council of India, 3 (1 & 2).

#### **Abstract**

Compared to any other child, school plays a greater role in the life of a deaf child. Educational opportunities equip a deaf child with communication skills, academic knowledge and vocational skills along with contributing in his cognitive, social, emotional growth and personality development. The principals as head of the institute are directly responsible for formulating and implementing school policies. Their qualifications, experience and attitudes not only give an image to the school but also affect the quality of the inputs given by the teachers. Similarly, quality of the teachers and the quality of inputs, provided by them are

directly visible in the output given by the students. Qualifications, teaching experience and other profile features of the principals and teachers and also information about the professional support staff of selected special schools for the deaf were studied as a part of a larger attempt to study the status of special schools for the deaf.

### **With a little bit of help – An early language training kit**

Karant Prathibha (2007). Journal of Rehabilitation Council of India, 3 (1& 2).

#### **Abstract**

Clinicians in the field of communication disorders in India have for long struggled with a lack of suitable clinical material both for testing and intervention. Our dependence on western material continues unabated despite their being unsuitable due to cultural considerations and their high costs. Consequently most clinicians make do without adequate therapeutic/suitable material or expend their precious time, which would otherwise be expended in constructive therapeutic work, in preparing basic material. This paper presents the results of a coordinated effort to develop suitable and affordable materials for early language training that can be used across India. The material that was developed with input from practicing clinicians from the specialties of speech-language pathology, linguistics, clinical psychology and special education was field tested in ten different states in ten different Indian languages, edited subsequently and finally compiled in the form of a kit with a manual of instructions.

## **Sociometric Study on the Friendship of the Hearing Impaired and Hearing Adults in Vocational Setting**

Roy Finita Glory (2009). Journal of Rehabilitation Council of India, 5 (1 & 2).

### **Abstract**

Friendship is the warp and wool of the social fabric. Studies have shown that when the disabled children have joined groups, which are not solely for the disabled, but include other non-handicaps also they gradually learn to participate, although it may take them a long time to feel relaxed in the situation. The research intends to study the friendship of hearing impaired adults in all its dimensions so, as to provide base for a comprehensive approach to develop a more meaningful and fruitful interpersonal relationship and social skills in a hearing impaired individual's life. The major findings of the study indicate that the hearing impaired employees had scored a lower score than the hearing employees in some of the dimensions of friendship. From the analysis of the sociograms, the researcher has determined that there is a significant difference in the performance of hearing impaired and hearing employees on the dimensions of friendship which indicated that hearing loss has an impact on communication and hence on social interaction.

## **Personal–Social Maturity of Children with Hearing Impairment and Parental Attitudes: A Study**

Kumar Suman and Rao Geeta (2009). Journal of Rehabilitation Council of India, 5 (1 & 2).

## **Abstract**

The present study was undertaken to investigate the relationship between personal–social maturity and parental attitudes. The sample comprised of 60 parents of 0-12 years old hearing impaired, i.e., 30 fathers with a mean age of 33.42 years and 30 mothers with a mean age of 28.9 years. “Parental Attitudes Scale” a self-assessment tool was specially developed which has reliability of 67, consisting of 33 statements was administered. The level of social maturity of the child as assessed on the “Vineland Social Maturity Scale”. Analysis of results indicates that there is no significant correlation ( $r=15$ ) between personal-social maturity of child and parental attitudes.

Human beings tend towards optimism. And most parents-to-be look forward to a normal child. If at all they have a reason to anticipate the birth of a child with a problem, they think in terms of physical handicap or blindness. But people rarely think of hearing impairment since it is invisible. There are 21.54 million children with hearing impairment in India, caused by inadequate healthcare or ear care. Of this number, it is estimated that 8.15 million are school children (NSSO, 2003). The consequences of this impairment too, are as far reaching as that of other handicaps, perhaps more so. It is known to affect speech and language development, academic achievement and employment prospects. However, some of the apparent effects on other areas of development for example, for social and emotional development, are in fact result of changed parental perception, attitudes and behaviour.

## **Profile of Students Studying in Special Schools for the Deaf in North India**

Randhawa Surinder P. K., Rastogi Renu, and Handa S.C. (2008). Journal of Rehabilitation Council of India, 4 (1 & 2).

### **Abstract**

In the coming years, new educational policies, advancement in technology and better awareness will give more and more deaf children chance to be in schools. However, presently it is estimated that out of the 3-4.8 million deaf children in India only 1 in 10 go to school and most of them still study in special schools. Present study profiles the student population of 20 special schools for the deaf in North India. It was found that out of the total 3,168 students majority were male, had severe or profound hearing loss and belonged to mainly lower socio-economic strata and many of them traveled long distances to be at school. Age of the youngest child was still between 4 and 6 years and in the absence of universal new born screening, lack of early identification and early intervention facilities, there still was an educational gap of 3-7 years. The number of students at class X and XII was very low and the students' language and speech development remained poor even after years of schooling. Most students used non-verbal communication mode though teachers and students were not trained in sign language. Most students undergo pre-vocational or vocational training in school but that is usually not sufficient to get gainful employment on school leaving.

### **The 'Hearing Aid Effect' in India: A Reality Check on the Mumbai Population**

Sovani Pallavi, and Mukundan Geetha (2010). Journal of Rehabilitation Council of India, 6 (1 & 2).

### **Abstract**

Hearing aids enhance quality of life. However, their acceptance by individuals with hearing impairment seems poor. One possible reason is the 'hearing aid effect' (HAE), i.e., negative attitudes

of other individuals towards a person with a hearing aid. The present study investigated the extent of the HAE in Mumbai; and the ability to identify hearing aids across gender and socioeconomic status (SES). A College students' Attitudes towards Loss of Hearing Questionnaire (C-ALHQ), photographs of two individuals with hearing impairment and three linear analog scales were used. Results revealed that 93.46% people reacted considerably, 60.92% always noticed a hearing aid, 35.34 % associated hearing aids with slowness of thought and 27.38% with senility, but only 11.25% with stupidity. The higher SES group seemed more aware; the lower SES population more tolerant. Females were at an advantage since their hearing aid could get camouflaged; also they were rated more positively than males.

## **New Trends in Deaf Education : Bilingualism and Second Language Learning**

Rao B. Nageshwar (2010). Journal of Rehabilitation Council of India, 6 (1 & 2).

### **Abstract**

“Researches have shown that Sign Language does not prevent the Deaf child from learning to speak. If the child acquires early Sign Language ability and is then taught to read and write a spoken/written language, they master the ability to speak much better. Therefore no bilingual programme is against speech training but embraces it.”

If deaf children get sign language stimulation from parents, other Deaf children and Deaf adults from the earliest possible age, they will acquire Sign Language as their first language in a manner equivalent to that in which a hearing child acquires a first spoken language. A good command of the first language is

crucial to success with the second language because second language learners use their first language as a point of reference in the acquisition of a second language.

### **Self-Concept of Hearing Impaired and Non-Disabled Students**

Alam Mohd. Ansar (2010). Journal of Rehabilitation Council of India, 6 (1 & 2).

#### **Abstract**

A total of 88 students, 44 Hearing impaired and 44 Non-disabled students were randomly selected from an educational institution of South Delhi. Half of the hearing impaired and nondisabled students were male and half were female. They were administered Mohsin's (1979) self-concept inventory (MSCI). ANOVA revealed significant effect of hearing status but non-significant effect of sex on self-concept was obtained. It means that the findings of ANOVA and

Regression analysis are similar. The hearing status emerged as the significant contributor to self-concept, but sex did not emerged as the significant contributor to the self-concept. The hearing status and sex had 12% variance in self-concept.

### **Parental Expectations about their Child's Outcome from Cochlear Implant: A Survey**

Kumar Ravi and Jalvi Rajeev R. (2010). Journal of Rehabilitation Council of India, 6 (1 & 2).

### **Abstract**

The present study was undertaken to investigate the expectations of parents about their child's outcome from cochlear implant. The sample comprised of 51 parents of those children who undergone/undergoing cochlear implant. To assess the parental expectations a draft questionnaire was adopted and modified so as to suit the Indian context. Five areas of expectations; communication abilities, social skills, academic achievement, change in future life and post implant rehabilitation demands were taken into consideration in order to assess the expectations of parents.

Parents rated their expectations on a 5-point scale from strongly agree to strongly disagree. Analysis of results indicated that parental expectations regarding different areas of expectations about their child's outcome from cochlear implant fall in two categories, i.e., high and medium level of expectations with varying degree and not a single parent showed low level of expectations or almost no expectations. These findings indicate that to improve collaborative intervention with parents of children undergoing cochlear implantation it is important to have greater understanding of parental expectations regarding their child's outcome from cochlear implant.

### **Study of Communicative Competence of Adults with Hearing Impairment**

Chatterjee Indranil, Dalvi Usha and Zoramsiami (2010). Journal of Rehabilitation Council of India, 6 (1 & 2).

### **Abstract**

The present study was undertaken to investigate whether there is a significant difference exists between receptive and expressive

communicative competence in home and social environment of persons with hearing impairment who are graduates and secondary school certificate (S.S.C.) and also to see whether education has any impact on the communicative competence. The sample comprises of 60 adults, 30 each in S.S.C. and graduate and each group consists of 15 males and 15 females. The participants were adults with prelingual severe to profound hearing loss with normal intellectual ability and no history of visual impairment or low vision or other associated problems with ability to read, write and understand English language and sign language. "Profile Questionnaire For Rating Communicative Performance" (Sanders, 1975) was used to extract information regarding their receptive abilities of adults with hearing impairment. Reliability score for social environment questionnaire was  $\alpha=0.8305$  and reliability for home environment questionnaire was  $\alpha=0.7293$  which indicated that both the questionnaires were reliable for research purpose. The results obtained indicates that the adults with hearing impaired were found to perform better in home environment than in social environment; graduate adults with hearing impaired had better communicative competence than S.S.C. adults with hearing impaired; expressive communicative competence was found to be better than receptive communicative competence; and communicative competence of females was found to be better than males. Poor communicative competence has been found in individuals with hearing impairment. The study has implications both in terms of assessment and intervention.

### **Study of prevalence and etiology of the hearing loss amongst school going children**

Kalpana R. and Chamyal P. C. (1997). Indian Journal of Otolaryngology and Head and Neck Surgery : official publication of the Association of Otolaryngologists of India, 49 (2), 142-144.

### **Abstract**

School survey study to assess the prevalence rates and etiological factors causing hearing loss among children in and around Pune Cantonment covering urban and semi-urban population has been carried out. We encountered deafness prevalence rate of 11.7% and chronic supportive otitis media (4.75% of the deaf children) the commonest cause. Maximum number of patients were in age group of 6-11 years and semi-urban children and those from lower socio-economic group had higher prevalence rate as compared to urban children and those from upper socio-economic group. Relevant suggestions for prevention and management of deafness have been made. This study emphasizes the fact at most of the etiological factors in causing hearing impairment in school going children are treatable and hence deafness can be prevented to a large extent if remedial measures are taken in time.

### **Deafness: Burden, prevention and control in India**

Garg Suneela, Chadha Shelly, Malhotra Sumit, and Agarwal A. K. (2009). National Medical Journal of India, 22 (2), 79-81.

### **Abstract**

The high burden of deafness globally and in India is largely preventable and avoidable. According to the 2005 estimates of WHO, 278 million people have disabling hearing impairment. The prevalence of deafness in Southeast Asia ranges from 4.6% to 8.8%. In India, 63 million people (6.3%) suffer from significant auditory loss. Nationwide disability surveys have estimated hearing loss to be the second most common cause of disability. A lack of skilled manpower and human resources make this problem a huge challenge. The Government of India has launched

the National Programme for Prevention and Control of Deafness. This article highlights the major components of the programme with a focus on manpower development and ear service provision including rehabilitation. Since the programme is also being implemented at the primary healthcare level, it envisages a reduction in the burden of deafness and prevention of future hearing loss in India.

### **Hearing Screening in Newborns (A Cross Sectional Study).**

Rughani Sudhir et al (2009). Indian Journal of Urology, 25(3), 361–371.

#### **Abstract**

It is crucial to timely diagnose hearing impairment in infants as early intervention can lead to decreased morbidity and better prognosis. This study analyzes and compares the incidence of hearing loss in normal as well as high risk newborns. A nonrandomized, cross sectional study of 306 newborns less than two months of age was conducted in the settings of the NICU, high-risk clinic as well as well baby clinic in the Department of Pediatrics, MP Shah Medical College, Jamnagar, India with the support of the ENT Department from March 1, 2010 to September 30, 2010 (6 months). All newborns (with or without risk for hearing loss) were considered eligible to be included in the study. Written consent of the parents was obtained. Patients were screened for hearing loss by Otoacoustic Emissions (OAE) testing in a soundproof room. The result of the test was noted in terms of PASS/REFER (FAIL). The overall incidence of hearing impairment in the study population of 306 newborns was found to be 8.2%. Out of the total study population of 306, the incidence of hearing impairment in 100 newborns having high-risk factor(s)

was 22%. The incidence of hearing loss in newborns not having any of the high-risk factors (206) was 1.46%. The risk of hearing impairment increases as the number of high-risk factors increases. Even in the newborns without any risk factors, the incidence of hearing impairment was 1.46%, which is very high. Thus we recommend hearing screening should be done in all newborns. A national newborn screening program which includes hearing screening should be implemented at all levels of health care facilities.

### **Cochlear implantation in India: A public health perspective**

Garg S, Singh R, Chadha S, and Agarwal A K (2011). Indian Journal of Medical Science, 65, 116-120.

#### **Abstract**

Around 7% of the population of India suffers from profound deafness. More than a million children need either hearing aid or cochlear implant surgery to restore their hearing power. Many of them had never heard a single word since their birth. Still only 5000 cochlear implant surgery has been conducted in the country, the first being nearly 20 years ago, and most of them in private health facilities where the patient paid out of their pocket. The main reason of such poor penetration of the surgery in masses is the inhibitory cost associated with cochlear implant surgery and the lack of trained man-power to conduct such surgeries. The other reason is being the government engagement with other pressing health needs of the society resulting in the shout of ear care falling on deaf ears. With the advent of National Program for Prevention and Control of Deafness (NPPCD) in 2006, there is renewed interest in tackling this public health disaster.

## **Effectiveness of supervised oral health maintenance in hearing impaired and mute children - A parallel randomized controlled trial.**

Pareek S, Nagaraj A, Yousuf A, Ganta S, Atri M, Singh K. (2015). Journal of International Society of Prevention and Community Dentistry, 5 (3), 176-182.

### **Abstract**

Context: Individuals with special needs may have great limitations in oral hygiene performance due to their potential motor, sensory, and intellectual disabilities. Thus, oral health care utilization is low among the disabled people. Hearing disorders affect the general behavior and impair the level of social functioning. Objectives: The present study was conducted to assess the dental health outcomes following supervised tooth brushing among institutionalized hearing impaired and mute children in Jaipur, Rajasthan. Materials and Methods: The study followed a single-blind, parallel, and randomized controlled design. A total of 315 students were divided into three groups of 105 children each. Group A included resident students, who underwent supervised tooth brushing under the supervision of their parents. The non-resident students were further divided into two groups: Group B and Group C. Group B children were under the supervision of a caregiver and Group C children were under the supervision of both investigator and caregiver. Results: There was an average reduction in plaque score during the subsequent second follow-up conducted 3 weeks after the start of the study and in the final follow-up conducted at 6 weeks. There was also a marked reduction in the gingival index scores in all the three groups. Conclusion: The program of teacher and parent supervised tooth-brushing with fluoride toothpaste can be safely targeted to socially deprived communities and can enable a significant reduction in plaque and gingival scores. Thus, an important principle of oral health education is the active involvement of parents and caregivers.

## Chapter 9

# VISUAL IMPAIRMENT



## **Effect of Educational Settings on Acquisition of Academic Skills Among Visually Impaired Students**

Agarwal Ashwini K. (2005). Journal of Rehabilitation Council of India, 1( 2).

### **Abstract**

There are number of educational settings in existence, catering to the educational needs of visually impaired students. Studying their influence on the development of students has been area of interest among the educationists. In the absence of such a study the need was felt by the author to understand the effect of educational setting on acquisition of academic skills among visually impaired students. The present article briefly describes the study.

## **Effectiveness of Audio-Tactile Material in Promoting Cognitive and Language Development in Visually Impaired Children**

Mittal S. R.and Sahu Shobhalaxmi (2005). Journal of Rehabilitation Council of India, 1 (2).

### **Abstract**

Visual impairment is a medical phenomenon. It relates to impaired sense of vision loss which affects the development of the children. In this way the visually impaired children become aware of the world through senses other than sight. Senses are the gateway to the knowledge. Moreover, vision is most actively used by man and hence his knowledge grows chiefly of his visual experiences. The resulting effects have been widely discussed but most accepted comes from Dr. Berthold Lowenfeld

who explained that blindness limits perception and cognition in three ways:

- In the range and variety of experiences.
- In the ability to get about.
- In the control of the environment and of the self in relation to it.

### **A Comparative Study of Self–concept of Visually Impaired and Sighted Young Adults**

Bhan Sujata (2005). Journal of Rehabilitation Council of India, 1(2).

#### **Abstract**

The present study attempts to investigate the difference in the self–concept of visually impaired adolescents and their sighted peers. The study was conducted on 80 visually impaired adolescents (40 boys and 40 girls) and 80 sighted adolescents (40 boys and 40 girls) studying with them. These adolescents were in the age range of 16-18 yrs and were attending college. The ‘Children’s self-concept scale’, standardized by S. P. Ahluwalia (Hindi version) was used for data collection. It was found that there is a significant difference between the self-concept of the sighted and the visually impaired adolescents. Though adolescence is a trying period for all adolescents; the visually impaired are at a disadvantage to compensate for their disability, as the opportunities provided to them are limited. The sighted adolescents were found to have a more positive self–concept. They were found to be more assertive, less shy, had better ability to acquire knowledge, were more popular in class, and had a feeling of overall well being. Visually impaired adolescent boys were found to have a better self-concept than visually impaired adolescent girls.

It was observed that visually impaired adolescent girls had more frustrations, more anxiety about their future, and were more self-conscious in comparison to their sighted peers. The attitude of the family members towards visually impaired girls was not very encouraging as reported by them. The adolescents had a positive self-concept as long as they were in special school settings but when they were in college among the majority of sighted adolescents they developed a negative self-concept. The study revealed an attitudinal change in family and society at large would go a long way in enhancing the self-concept of the visually impaired adolescents.

### **An Analytic Study of Hindi Braille Reading Errors of Visually Impaired Children Studying in Special Schools of Northern India**

Sharma Sushama and Kumar Sushil (2005). Journal of Rehabilitation Council of India, 1 (1).

#### **Abstract**

Present paper is based on research findings of a study on Reading Errors in Bharathi Hindi Braille conducted on a sample of 70 visually impaired children studying in Grades VI to VIII, aged 13 to 16 years, in two special schools of Northern India. A test of 80 items (three lettered words) was developed by the investigators. Data were gathered by the trained teachers. The errors were classified into three categories, viz., Perception errors, Orientation errors, and Interpretation errors. Percentages of the errors in Orientation were the highest, i.e. 70 per cent whereas Perception errors were the lowest (7.43%). However, the Interpretation errors were 22.57 per cent. The Orientation errors were further analyzed in terms of Reversal errors, Rotation errors, Horizontal alignment errors and Vertical alignment errors. The Horizontal alignment errors were found to be the highest, i.e. 26

per cent while Rotation errors were the lowest, i.e. 8.57 per cent. Perception errors were divided into sub-categories, namely, Missed dot errors and Added dot errors. The percentage of Missed dot and Added dot errors were 4.56 per cent and 2.86 per cent respectively. Interpretation errors were analyzed in terms of Association and Gross substitution errors that were found to be 13.43 per cent and 9.14 per cent respectively.

The findings have far reaching implications in the education of children with vision impairment in India. These findings could be used for developing appropriate pedagogy of Braille instruction and can further be used for designing remedial programmes for visually impaired children.

### **Inclusion of Learners with Visual Impairments: The Need for Modifications**

Julka Anita (2005). Journal of Rehabilitation Council of India, 1 (1).

#### **Abstract**

Learners with visual impairments have some unique needs which call for accommodation by the regular class teachers to ensure their full access to regular school curriculum. The teachers are generally unaware of the challenges faced by these children while studying in inclusive settings. The current pragmatic change towards inclusive education throughout the world and the underlying philosophy necessitates creating awareness at different levels about the specific needs of different groups of learners. Thus in order to progress this important agenda of inclusion, it is important not only to know what inclusion means but also what effects visual impairment has on teaching and learning in inclusive classrooms. The paper highlights the unique needs of learners with visual impairments and the modifications that need to be made in order to help them develop up to their potential.

## **Role of Assistive Technology in Teaching – Learning English language to the Students with Visual Impairment**

Mittal S. R. and Chawla Sunita

Journal of Rehabilitation Council of India, (2012). 8 (1 & 2).

### **Abstract**

In this article an attempt has been made to highlight the role of assistive technology in teaching and learning English language to the students with visual impairments. First of all, the article acquaints with the assistive technology and its different types. This article focuses on how intervention of such technology can play its vital role and need in teaching-learning of English language to the students with visual impairments and can help to overcome their barriers. The advantages of successful improvement and inclusion of technology in education of sensory impaired students which are of high importance of our future has been discussed with the concluding remarks.

## **Level of Aspiration of Children With Visual Impairment Studying in Exclusive and Integrated Settings**

Sharma Anjul (2007). Journal of Rehabilitation Council of India, 3 (1 & 2).

### **Abstract**

The present study attempts to investigate levels of aspiration of children with visual impairment studying in exclusive and integrated settings. The study was conducted on 100 children with visual impairment (50 studying in exclusive and 50 studying

integrated settings). These children were studying from class VI to XII. The children studying in both the settings were selected randomly. The personal data of the concerned visually impaired children were collected in such a way that it matched with each other for relevant variables. It is found that the mean level of aspiration of visually impaired children studying in integrated setting is higher. Significant difference is also found in the mean level of aspiration of the girls and of the boys studying in exclusive and integrated settings. However, the level of aspiration of visually impaired girls vs. boys irrespective of settings is not significant.

## **Mental Health of College Students with Visual Impairment**

Kumar Sushil (2006). Journal of Rehabilitation Council of India, 2 (1-2).

### **Abstract**

Psycho-social life of an individual is influenced by the condition of visual impairment. Consequently it may also affect his/her mental health. The present study is an attempt to investigate the effect of visual impairment on mental health of college students. The study was planned, designed and carried out to find out the difference between mental health of college students with visual impairment (VI) and their seeing counterparts. Two comparable purposive samples of 60 visually impaired and 60 seeing college students were selected from Haryana and Delhi. Mental Health Inventory (MHI) developed by Jagdish and Shrivastava was used to measure mental health of college students. Data was collected by personally administering MHI on individual basis. "t-test" was employed to analyze the data. Visually impaired and seeing college students differed significantly on total mental health and its all the six dimensions, viz, positive self-evaluation, perception

of reality, integration of personality, autonomy, group oriented attitude and environmental mastery. Seeing college students were found better than college students with VI in terms of their total mental health. However, college students with VI were found better on autonomy in comparison to their seeing counter parts.

## **Information Processing and knowledge presentation in Persons with Visual Impairment**

Bhan Sujata and Swarup Smriti (2009). Journal of Rehabilitation Council of India, 5,(1 & 2).

### **Abstract**

All learning in life is based on the process of information input, information organization and information application. Since the source of information input is through the sensory channels it gets represented through the same channels. How does information get converted into knowledge in persons with visual impairment whose visual channels, the source of visual input are blocked?

The paper analyses and discusses the difficulties of visually impaired in receiving information and converting it into organized knowledge. How does the schema work? What are the methods of information processing adopted by the visually impaired?

The paper highlights the information processing approach in assessment of the cognitive functioning of the persons with visual impairment and its implications for intervention. The paper emphasizes the opening of new vista of inclusion of persons with visual impairment in the mainstream.

## **A Study of Academic Anxiety of Visually Impaired Students in Relation to their Academic Achievement**

Rekha Rani (2010). Journal of Rehabilitation Council of India, Volume 6 (1 & 2.)

### **Abstract**

The present study was conducted to explore the relationship between academic anxiety and academic achievement of visually impaired students. The level of academic anxiety and academic achievement of these students with respect to their gender, school setting, place of living, degree of impairment and onset of impairment was also studied. A sample of 282 visually impaired secondary school students was selected from various schools located at Delhi region. The total sample was categorized according to gender (male - female), school setting (inclusive - exclusive), place of living (urban - rural), degree of impairment (totally blind- lowvision) and onset of impairment (born blind – acquired blind). A modified Hindi version of Academic Anxiety Scale for Children (AASC) by Singh and Sen Gupta to assess academic anxiety and composite of marks obtained by these students in final examination were used for academic achievement. Findings revealed that academic anxiety of visually impaired students was positively and significantly correlated with their academic achievement. Female students were academically more anxious than their male counterparts. Moreover school setting also has significant impact on academic achievement of visually impaired students.

## **Visual and hearing impairment among rural elderly of south India: A community-based study**

Deepthi R. and Kasthuri Arvind (2012). *Geriatrics and Gerontology International*, 12(1), 116-122

### **Abstract**

**Aim:** Of India's population, 76.6 million (7.2%) are aged above 60 years. Increasing age is associated with increasing disability and functional impairments such as low vision, loss of mobility and hearing impairment. Hence, the purpose of this paper is to study the prevalence of hearing and visual impairment among a rural elderly population in South India and its association with selected variables.

**Methods:** This was a cross-sectional study of elderly persons in two villages of Bangalore District, Karnataka, South India. Elderly persons identified were administered a questionnaire for assessment of demographic details, health and function related information. Visual acuity was checked using Snellen's E chart for distant vision. Hearing was assessed using pure tone audiometry.

**Results:** Two hundred and fifty-seven (12.2%) of the population were elderly in these two villages. Seventy-two (32.4%) of the elderly persons were facing problems completely or partially in at least one of the activities and 10 (4.5%) elderly persons had cognitive impairment. Sixty-two (35.4%) of the elderly had low vision and 22 (12.6%) were blind. On assessment with pure tone audiometry, 117 (66.9%) of the elderly persons had some degree of hearing impairment. Forty-three (24.6%) of the elderly had disabling hearing impairment. Forty-seven (26.9%) of the elderly had combined low vision associated with hearing impairment and 18 (10.2%) had combined blindness along with hearing impairment. As age advanced there was a significant increase in visual, hearing and combined impairments.

Conclusion: Visual and hearing impairment are important health problems among elderly persons in rural areas of South India.

### **A Study of Factors Contributing to the Efficiency of Heads of Schools for the Visually Impaired as an Administrator and Teachers**

Kain Vinod Kumar (2010). Ph.D. Thesis (Education), Jamia Millia Islamia, New Delhi

Supervisor - Prof. S.R. Mittal

#### **Abstract**

The present investigation attempted to look into certain factors, which believed to have significant impact on the effective administration of a school for children with Visual Impairment. The various independent variables had been used in this investigation to find out the efficiency of the head of the schools for the visually impaired children with the level of efficiency of the heads as administrators and as teachers like qualification, experience in disability and non-disability area, teachers strength, disability of the heads, locality of the schools, management of the schools etc. The main objectives of the study were to compare the qualification of the heads of the schools for the visually impaired children with the level of efficiency of the heads as administrators and as teachers, to compare the experience of the heads of the schools for the visually impaired with the level of efficiency of the heads as administrators and as teachers, to compare the teachers strength of the heads of the schools for the visually impaired children with the level of efficiency of the heads as administrators and as teachers, to compare the experience in non-disability area of the heads of the schools for the visually impaired children with the level of efficiency of the heads as administrators and as teachers, to compare the disability of the

heads of the schools for the visually impaired children with the level of efficiency of the heads as administrators and as teachers, to compare the locality of the schools of the heads of the schools for the visually impaired children with the level of efficiency of the heads as administrators and as teachers, to identify factors contributing to the efficient discharge of duties of the heads of schools for the visually impaired children as administrators and as teachers, to study the difference, if any, in the level of efficiency of heads and teachers working in government and non-governmental schools for the visual impairment.

The investigator used a Check List developed by Mrs. Vijay Ravi to study the efficiency level of the principals and teachers after making suitable modification of the statements given in the check list. The Descriptive research was used to find out the answers of the questions through the analysis of variable relationships. Various statistical techniques such as measures of central tendencies, t-test, and coefficient of correlation were used to analyse the data. The schools located in the states of Delhi, Hariyana, Punjab, Uttar Pradesh, Himachal Pradesh and Uttarakhand formed the sample of the present study. The Major findings of the research were as followed- The heads who have post graduate degree with professional degree in general education and diploma in special education have better administrative skills as compare to those principals who have post-graduate degree with professional qualification in special education. Heads who have research background in the field with professional qualification in special education are better administrator and have better administrative skills as compare to those heads who have only post-graduate degree with professional qualification in the special education. Heads who have graduate with professional diploma in special education are better teachers as compare to those principals who have post-graduate degree with post graduate professional degree in special education or post-graduate professional degree in education and diploma in special education.

Heads who have more experiences are better administrators and teachers in the field of disability. The heads who have more number of teachers in schools for visually impaired children improved the efficiency of the heads as administrators and teachers. Another finding revealed that the heads who are working in the government organizations are more efficient in administrative skills as compare to those principals who are working in the non-governmental organizations. Thus, based on the finding of the present investigation it can be said that the head of schools for children with visual impairment having qualifications in the field of special education as well as general education and also research degree are better administrators and better teachers. An attempt on the part of management of special schools for visually impaired should be made to appoint heads with special education, general education and research background.

### **A Study of Identification of Teaching Competencies of Teachers of Children with Visual Impairment and Upgrading the B. Ed. Special Education Curriculum**

Gaur Keemti (2010). Ph.D. Thesis (Education), Jamia Millia Islamia, New Delhi.

Name of the Supervisor Prof. S. R. Mittal

#### **Abstract**

##### **Introduction:**

The present study was conducted for the identification of the teaching competencies of the teachers of the children with visual impairment. The aim was to suggest the enrichment of the syllabus of B. Ed. Special Education (visual impairment) and also to

outline an enrichment program for equipping the in service teachers of CWVI so that they may perform their task more efficiently.

#### Limitation of the study

Teachers teaching in special schools and inclusive schools located in Delhi and U.P and principals/district coordinators of SSA as well as B. Ed. Special Education (Visual Impairment) course developed by RCI and being implemented by DU, JRHU, KU, BHU and JMI were studied.

#### Main objectives of the study

- To compare the identified teaching competencies of teachers working in different educational setting with those which are intended to be developed during B. Ed. Special Education (visual impairment) course at different Universities/ Colleges.
- To identify gaps between the teaching competencies of teachers working in special schools/ inclusive setting and the competencies intended to be developed during B. Ed. Special Education (visual impairment) course at different Universities/ Colleges.
- To develop a short duration curriculum for strengthening the teaching competencies of teachers of children with visual impairment working in different educational settings
- To suggest modifications in present RCI curriculum.

#### Method

Descriptive method was employed for the purpose of this study. Under descriptive research, survey method has been employed. Survey research is exploratory in nature with the emphasis on scope rather than on depth.

### Sample

90 teachers of special schools/ inclusive schools and 20 principals/ district coordinators of SSA were selected for the study.

### Tool

No standardized tool was available to study the problem. Therefore self-made observation schedules viz. Teaching Competencies Observation Schedule (TCOS) and Teacher Competencies Information Schedule (TCIS) were used for identifying the knowledge and skill based competencies of the teachers of children with visual impairment.

### Findings

The findings of the study clearly indicate that 41.05% of the competencies like access information and services from the community; knowledge of narration, storytelling, dramatization and questioning for teaching languages; Demonstration of how to do the tasks; respond accurately to the asked question; manage class time properly while teaching; knowledge of stress management; historical development of education of CWVI; issues and trends in special education etc. were possessed by teachers of the children with visual impairment.

It is also found from the analysis that 49.47% of the competencies were not being transected up to desired level although they are included in the five universities of which the B. Ed. Special Education (VI) syllabi have been studied. Most of these competencies related to the instructional strategies like prepare, adapted or modified material; accessible print and other formats, transcribe, proofread and interline material in contracted literary and Nemeth Braille codes; teaching plus curriculum, exhibits skills in the use of abacus; modify visual materials for partially seeing readers; knows strategies for teaching Braille reading and writing; strategies for teaching listening and compensatory skills, technology skills, visual efficiency etc.

Only 9.47% of the competencies were not being transected by the teachers at any level of which the some competencies like management strategies for storing, circulating and repairing equipments, strategies for study habits and skills, role of civic bodies, knowledge of the self-advocacy teaching strategies were found in the literature on curriculum on teacher preparation in developed countries.

Another interesting finding was that the competency of mastery in the preparation and use of tactile and auditory maps for effective mobility in CWVI was not exhibited by the teachers at all although it was included in the syllabi of five universities have been studied.

## **A Comparative Study of Academic Skills of Visually Impaired Students Studying in Various Educational Settings**

Agarwal Ashwini K. (2004). Ph.D. Thesis (Education), Jamia Millia Islamia, New Delhi.

Supervisor: Dr. S. R. Mittal

### **Abstract**

**Introduction:** The investigator conducted the study with the objective to assess and compare the five areas of academic skills of visually impaired students, who were studying in three settings (special school setting, semi-integrated setting and integrated setting. The objective of the study was also to compare the academic skills of visually impaired boys with visually impaired girls in the three educational settings.

**Limitations:** The research was restricted to the visually impaired students who did not have functionally useful vision in the State of Delhi in the three settings and five areas of academic skills.

**Tools:** The researcher after conducting pilot study, designed and developed tools along with guidelines for assessment of academic skill in the five areas of academic skills i.e. (i) reading Braille script, (ii) language usage and comprehension, (iii) solving problems in Mathematics (iv) reasoning in Science and (v) providing information in Social Studies for visually impaired students in various educational settings in terms of scores. The validity was endorsed by the experts and through test retest method it was observed that the tests had high reliability.

**Method:** The study utilized ex-post facto method of research. This method of research is a systematic, empirical investigation in which the researcher does not have direct control on independent variable because their manifestations have already occurred or because they are inherently not manipulative.

**Sample:** The visually impaired students were identified in the State of Delhi and were subjected to WISC-R (NIVH adapted Verbal Hindi) to ascertain I.Q. and the results were tabulated. Five girls and five boys each from the classes VI, VII & VIII in three settings were chosen such that their I.Q. score was between 95 and 110 so as to get the uniform sample of 30 to represent the population in each of three settings. The assessment of academic skills was carried on the sample of 90 students.

**Findings:** The analysis of six hypothesis of the study revealed that semi-integrated setting was most effective in imparting academic skills and the visually impaired students in this particular setting were more efficient both in special academic skills like Braille reading as well as general academic skills such as problem solving, reasoning, information providing and language comprehension and usage. This was primarily due to balance between protection and competition among the peer group in the setting.

Another interesting finding was that visually impaired students going to mainstream schools both in integrated as well as semi-integrated setting were good at problem solving and reasoning skills due to greater exposure to the subjects like Mathematics and Science. The investigator concluded that visually impaired children should be admitted to mainstream schools in large numbers. Integrated setting should be promoted and strengthened. Special schools should be utilized to provide resource services as a supplement to integrated setting.

Last but not the least important finding from the analysis of hypotheses was remarkable uniformity between visually impaired boys and visually impaired girls in academic skills. Both were equal in their performance. The investigator concluded that uniform education policy and procedures shall hold good for both.

### **A comparative study of comprehension by blind Students at the age of 5 to 14 years, the material is presented through the Braille and on Cassettes.**

Pradhan Mithlesh (2003). Ph.D. Thesis (Education), Jamia Millia Islamia, New Delhi.

Supervisor : Dr. Kusum Sharma.

Co-Supervisor : Mr. Lal Advani

#### **Abstract**

Objective: The present study attempts to identify suitable mode of presentation of learning. One of its major objectives is, to study the comprehension level among visually impaired children in different subjects through two modes of learning i.e. Tactile & Auditory.

Background: Rapidly changing and IT driven world, communication needs to be faster. Braille reading speed of the visually handicapped children is not up to the mark as against their normal peers.

Various studies abroad in this field, reveal overwhelmingly that the auditory presentation is more quickly received and comprehended than that in Braille script.

Therefore auditory channel is an exclusive alternative for a visually impaired student to improve the potential for coping with the speed and scope of present educational program.

Observation: When we compare two facilities, we find that both have their own specific advantages:

Auditory facility has an edge over the Braille system, in terms of comfort & speed. Thus Listening helps in speedy reception of communication.

Braille reading helps in its more consummate comprehension.

#### Outcomes of the Study

##### 1. Higher Grades - IVth to VIII (10 to 14 years)

The improvement in comprehension of visually impaired students is significantly better through auditory mode as compared to tactile mode in - subjects - Hindi, Maths, Social Study, and General Science.

Thus listening through the audio cassettes would be better medium of learning at higher grades.

##### 2. Lower Grades - Ist to IIIrd (5 to 9 years)

Learning through recorded material would increase potentiality of comprehension in subjects - Social study, General Science.

Due to lack of concentration in this age group, Learning through Braille would be more comprehensible in subjects - Hindi, Arithmetic than listening.

Braille is the exclusive modality of effective & constructive learning for Spelling & Punctuation.

Conclusion: In comparing both the modes of learning (i.e. Auditory & Tactile) for education of visually handicapped children; For optimizing comprehension in different subjects, judicious use of proper media i.e. Braille or Cassette, essentially depends upon the demands of Subject & Grade.

### **A Comparative Study of Self-concept and Self-esteem of Blind Students Studying in integrated and Special School Settings.**

Sharma, Surinder Kumar (2002). Ph.D. Thesis (Education), Jamia Millia Islamia, New Delhi.

Supervisor : Dr. S. R. Mittal,

#### **Abstract**

Certain landmark changes resolutions, reports and provisions in the recent past with regard to the education and rehabilitation of blind people have more or less emphasized the need and importance of integrated education and mainstreaming as an effective approach for providing natural environment for socialization through interaction with sighted peers, reducing the cost on special education system, providing opportunities for self fulfillment, providing learning experiences in least restrictive environment, bringing the blind into educational and economic mainstream, utilizing the existing educational infrastructure, and achieving the target of universalization of education. An

underlying assumption in providing integrated education to the blind children is that it would enhance their social emotional well-being including enhancement of self-concept and self-esteem which remains an important goal in education.

However, despite the above mentioned stated benefits of integrated education the research findings in this regard are contradictory and inconclusive. While some researchers in the field of education and rehabilitation of disabled children have demonstrated the integrated or mainstreamed educational provisions to be socially, emotionally and academically beneficial to the disabled children, there are some researches which have shown no significant difference among disabled children studying in different educational settings or have found the special educational provisions to be more beneficial to the disabled in terms of their social emotional and educational development.

Considering that the researches do not fully agree on the benefits of integrated education, the present study was designed to investigate the variations of self-concept (including its various dimensions) and self esteem in blind students attending integrated school settings and special school settings. The study involved 104 blind children drawn randomly and equally from different schools in NCT Delhi having integrated educational provisions and schools exclusively for the blind children. The sample included 60 boys and 44 girls (30 and 22 each from the two settings) with mean age 16.84 and 16.16 for boys in integrated and special school settings respectively. The mean age of girls in the two groups was 16.65 and 16.57 respectively. The sample from the two settings were matched for age, sex, intelligence and SES by one to one or student to student matching method.

Adopting ex post facto field study method and employing WAIS-R (developed by T.B. Singh); Kuppaswamy's Socio Economic Status Scale; Saraswat's Self Concept Questionnaire and G.P.

Thakur and M.S. Prasad's Self Esteem Inventory the data was collected and analyzed by ANOVA as main statistical technique. The latter two tests were adapted in a pilot study for use with blind students in this study.

The results of the study showed that the students (boys and girls together) from integrated school setting did not differ significantly from their counterparts in special school settings on global self concept ( $F = 2.94$ ). Blind boys and girl student in two setting also did not differ significantly with their counterparts on total self concept ( $F = 1.09$  and  $2.00$  respectively). On physical, educational, moral and intellectual dimensions of self concept also no significant differences were found ( $F = .27, 1.05, 2.88$  and  $.91$  respectively).

However on social, and temperamental dimensions of self concept the two groups differed significantly ( $F = 17.28$ ) and  $9.21$  respectively). Boys and girls in the two groups were compared separately and the result showed that while boys from the two settings differed significantly on social and temperamental dimensions of self concept ( $4.04$  and  $7.49$  respectively), the girls were not found to be significantly different on any of the dimensions of self concept.

On self-esteem no. significant differences were found between two groups of blind students ( $F = 3.06$ ). Boys and girls in the two settings were also found to be not significantly different ( $F = 3.36$  for boys and  $.24$  for girls) on this variable. The results of the study were discussed and interpreted in context of earlier research studies in the area and some relevant social psychological principles and theories to explain the reason for certain phenomenon which occurred in the present study.

## **Emotional Intelligence of Visually Impaired Adolescent girls in relation to their Level of Aspiration and Educational Achievement**

Panda Amruta (2010). Ph.D. Thesis (Education), Jamia Millia Islamia, New Delhi.

Name of the Supervisor: Prof. S.R. Mittal

Name of the Co-Supervisor: Prof. Neerja Shukla

### **Abstract**

**Introduction:** Adolescence is such a stage where an individual always faces problems of adjustment in the society. In the developmental milestones, adolescence is a transitional stage of development that occurs between childhood and adulthood. This transition involves biological, social and psychological changes. This is a most crucial for a girl in which she faces some typical psycho-emotional problems to cope with the immediate and subsequent environment. And if this problem is associated with some disabilities especially with visual impairment, then enormous effort is needed to train them for self-sustenance.

**Rationale:** Adolescents especially girls and specifically visually impaired girls face some typical socio-psycho-emotional distresses after the onset of their adolescent age. In this home, school, and society plays a substantial role in the right or wrong upbringing. Identity crisis and depression, their changing mind, body and relationships often put them in stressful situation. It has been claimed that congenitally impaired persons have more developmental milestones' difficulties than those who have been impaired later in life. Several researchers found that gender, age and disability matter in an individual's adjustment to self and others. So with a view to get in-depth knowledge about these

individuals and to suggest some remedies for their betterment, it was decided to take visually impaired adolescent girls as sample for the present study with special reference to see the relationship of emotional intelligence with level of aspiration and educational achievement

**Objectives:** The major objective of the present study was to find out the correlation of emotional intelligence with level of aspiration and educational achievement of visually impaired adolescent girls studying in both inclusive and exclusive settings. Another most important objective of the present study is the difference between two settings and two categories of visually impaired in terms of emotional intelligence, level of aspiration and educational achievement.

**Methodology:** For the present study, Descriptive survey method was employed by the researcher. The purposive cum convenience sampling technique was used to the selection of the sample from Delhi & NCR. The sample consists of 100 visually impaired adolescent girls- 50 from inclusive setting and 50 from exclusive setting. The researcher adopted the Emotional Intelligence Test (Developed by Dr. Ramvir Sharma) and developed the Level of Aspiration Tool for collection of data. For Educational Achievement, annual achievement score of each individual sample were collected from concerned school. For analysis of data Mean, S.D., Product Moment Correlation and Regression statistical techniques were used. t-test was used to see the significance of difference between two groups.

**Findings:** The major findings on the basis of objectives revealed that emotional intelligence is more closely related with educational achievement than level of aspiration with reference to specific sample. It was also found that out of five dimensions of emotional intelligence both managing emotions and empathy have very low or no correlation with level of aspiration and educational

achievement. Another most important findings of the present study are the differences between two settings and two categories of visually impaired in terms of emotional intelligence, level of aspiration and educational achievement. Significance differences were found between inclusive vs. exclusive settings and congenital vs. adventitious groups of visually impaired adolescent girls on these mentioned variables.

Implications: On the basis of above findings it implies that the institutional authorities, school/college heads, special educators, teachers, and clinical psychologists are required to take appropriate measures to improve the relationships of empathy and managing emotions with level of aspiration and educational achievement by way of proper activities planned for this purpose. Proper environment should be provided to the visually impaired adolescent girls to improve their emotional level. Appropriate steps need to be taken to improve the emotional intelligence and aspiration level. Schools authorities of the inclusive system should take certain steps for more effective inclusion of special needs children.

### **A study of self-concept, emotional intelligence and academic anxiety of visually challenged students in inclusive and exclusive schools in relation to scholastic achievement**

Rani Rekha (2013). Ph.D. Thesis, Aligarh Muslim University, Aligarh.

Supervisor : Sunita Sharma

#### **Abstract**

The existence of disabled members is not uncommon in any society or community but most of the time disabled are in social

exclusion/excluded physically, socially, academically and in many other areas. They live in the society but their needs are not addressed properly. Continued segregation fosters stereotypes, ignorance, stigma, fear and prejudices in disabled, which limit their participation in community as well as society and action as a whole. There are various types of disabilities such as visual impairment, hearing impairment, mental retardation, locomotor impairment, autism, deaf blindness, cerebral palsy and others. Since the disability may affect the organs or body parts of an individual and his/her participation in different spheres of life, it becomes a multi dimensional experience for the person involved. Visual impairment and its related disability both are similar to other disabilities but person suffering from visual impairment is treated differently as this is a visible disability. As per the Census 2001 the visually challenged constitute 48.5 percent of the total disabled population. Such a large section of the society cannot be overlooked on the grounds of disability. To overcome this hazardous situation, the significant persons related to a disabled individual are required to understand the ecology of a disabled child i.e. nature and nurture. While a child s behavior is determined by his /her genetic makeup on one hand, nurture certainly plays a major role in determining how the child will respond to the condition itself. History provides evidence of a number of great persons suffering from visual disability who touch the heights of success and excel in different life spheres when given opportunities. The positive attitude of parents, teachers, and society members towards them and systematic provisions for education can help people with visual disability to recognize their abilities and potentials to overcome their disability and to rehabilitate in all spheres of life.

## **Effectiveness of using teachers to screen eyes of school-going children in Satna district of Madhya Pradesh, India.**

Sudhan. A., Pandey. A., et al (2009). Indian Journal of ophthalmology, 1.57(6), 455-458.

### **Abstract**

**Aim:** To assess the effectiveness of teachers in a vision screening program for children in classes 5th to 12th attending school in two blocks of a district of north central India.

**Materials and Methods:** Ophthalmic assistants trained school teachers to measure visual acuity and to identify obvious ocular abnormalities in children. Children with visual acuity worse than 20/30 in any eye and/or any obvious ocular abnormality were referred to an ophthalmic assistant. Ophthalmic assistants also repeated eye examinations on a random sample of children identified as normal (approximately 1%, n=543) by the teachers. Ophthalmic assistants prescribed spectacles to children needing refractive correction and referred children needing further examination to a pediatric ophthalmologist at the base hospital.

**Results:** Five hundred and thirty teachers from 530 schools enrolled 77,778 children in the project and screened 68,833 (88.50%) of enrolled children. Teachers referred 3,822 children (4.91%) with eye defects for further examination by the ophthalmic assistant who confirmed eye defects in 1242 children (1.80% of all screened children). Myopia (n=410, 33.01%), Vitamin A deficiency (n=143, 11.51%) and strabismus (n=134, 10.79%) were the most common eye problems identified by the ophthalmic assistant. Ophthalmic assistants identified 57.97% referrals as false positives and 6.08% children as false negatives from the random sample of normal children. Spectacles were prescribed to 39.47% of children confirmed with eye defects.

Conclusions: Primary vision screening by teachers has effectively reduced the workload of ophthalmic assistants. High false positive and false negative rates need to be studied further.

### **Oral health knowledge, practice, oral hygiene status, and dental caries prevalence among visually impaired children in Bangalore.**

ST. Prashanth., Bhatnagar S., et al (2011). Journal of Indian Society of Pedodontics and Preventive Dentistry, 29(2), 102-105.

#### **Abstract**

Introduction: Visually impaired children daily face challenges for bearing their everyday skills. Maintenance of proper oral hygiene is one among them.

Aim: The aim of the study was to assess the oral health knowledge, practice, oral hygiene status, and dental caries prevalence among visually impaired children in Bangalore.

Materials and Methods: A total of 85 children were asked verbally a questionnaire regarding the frequency of brushing, cleaning tools, use of dentifrice, knowledge about the role of sugar in producing dental decay, and frequency of visit to the dentist. All children were screened and DMF and def scores were recorded and oral hygiene status were assessed by Green and Vermillion index.

Results: Green and Vermillion index. Kruskal Wallis Chi square test was performed and no statistically significant results were obtained with DMF and def scores as well as OHI scores across different ages in the range of 8 to 13 years. A highly statistically significant result was obtained with dental caries prevalence and oral hygiene status of visually impaired children.

Conclusions: The present study shows not much worsening of oral health status in the study population. A little extra care by the parent or caretaker regarding oral hygiene can give drastic results in reduction of dental caries.

### **Community rehabilitation of disabled with a focus on blind persons: Indian perspective.**

Jose R. and Sachdeva S (2010). Indian Journal of Ophthalmology, 58(2), 137-142.

#### **Abstract**

India, the largest democratic country in the world, is marching ahead strongly on the growth and developmental front and is poised to be the leader in the market economy. This role creates and increases far greater responsibilities on us in ensuring that the benefit of the developmental cycle reaches each and every citizen of this country, including the able and the disabled ones. It has been enshrined in the Constitution of India to ensure equality, freedom, justice, and dignity of all individuals and implicitly mandates an inclusive society. With increase in consideration of quality parameters in all spheres of life including availability, access, and provision of comprehensive services to the disabled, it is pertinent to have a look on the contribution of government in keeping the aspiration and commitment towards common people. The article attempts to review the concept of rehabilitation for the disabled keeping a focus on the blind person, and list out the activities, programs/schemes, institutional structure and initiatives taken by the Government of India (GOI) for the same and the incentives/benefits extended to blind persons. The article concludes by reiterating the importance of individual need assessment and mentioning new initiatives proposed on Low Vision services in the approved 11<sup>th</sup> plan under National

Programme for Control of Blindness (NPCB). The source of information has been annual reports, notification and the approved 11<sup>th</sup> five-year plan of GOI, articles published with key words like rehabilitation, disability, assistive devices, low vision aids, and/or blind person through the mode of Internet. Annexure provides a list of selected institutions in the country offering Low Vision services compiled from various sources through personal communication and an approved list of training institutes under NPCB, GOI offering Low Vision training.

## **Visual impairment in school children in Southern India.**

Kalikiyayi V., Naduvilath, A. K., et al (1997). Indian Journal of Ophthalmology, 1.45 (2), 129-134.

### **Abstract**

This study was done to determine the prevalence of visual impairment due to refractive errors and ocular diseases in lower middle class school children of Hyderabad, India. A total of 4,029 children, which included 2,348 males and 1,681 females, in the age range of 3 to 18 years from 9 schools were screened with a detailed ocular examination protocol. Among 3,669 children in whom visual acuity could be recorded, on presentation 115 (3.1%) had visual acuity < 6/18 in the better eye (equivalent to visual impairment), while 41 (1.1%) had visual acuity of 6/60 in the better eye (equivalent to legal blindness) out of which 18 (0.5%) had visual acuity < 6/60 in the better eye (equivalent to economic blindness). Of 115 children who presented with initial visual acuity < 6/18, vision improved to ≥6/18 with refraction in 109 (94.8%). No child was legally or economically blind after refractive correction. Prevalence of hyperopia was 22.6%, myopia 8.6% and astigmatism 10.3%. The prevalence of myopia was

significantly higher among children  $\geq 10$  years of age ( $P < 0.001$ ). The maximum, mean and median values for myopia were 10.00, 1.35 and 0.75 D in the better eye. For hyperopia these values were 8.50, 0.65 and 0.50 D. The major causes for best corrected visual acuity  $< 6/9$  in the worse eye for 51 (1.4%) children included amblyopia in 40 (1.1%), corneal diseases in 5 (0.1%), cataract in 2 (0.05%) and others in 4 (0.1%). Out of the total, 30 (0.7%) children had strabismus. These data support the assumption that vision screening of school children in developing countries could be useful in detecting correctable causes of decreased vision, especially refractive errors, and in minimizing long term permanent visual disability.

### **The Development of the LV Prasad - Functional Vision Questionnaire: A Measure of Functional Vision Performance of Visually Impaired Children.**

Gothwal V. K., et al (2003). ARVO Journal, 44 (9), 131-139.

#### **Abstract**

**Purpose:** To develop a reliable and valid questionnaire (the LV Prasad-Functional Vision Questionnaire, LVP-FVQ) to assess self-reported functional vision problems of visually impaired school children.

**Methods:** The LVP-FVQ consisting of 19 items was administered verbally to 78 visually impaired Indian school children aged 8 to 18 years. Responses for each item were rated on a 5-point scale. A Rasch analysis of the ordinal difficulty ratings was used to estimate interval measures of perceived visual ability for functional vision performance.

**Results:** Content validity of the LVP-FVQ was shown by the good separation index (3.75) and high reliability scores (0.93)

for the item parameters. Construct validity was shown with good model fit statistics. Criterion validity of the LVP-FVQ was shown by good discrimination among subjects who answered “seeing much worse” versus “as well as”; “seeing much worse” versus “as well as/a little worse” and “seeing much worse” versus “a little worse,” compared with their normal-sighted friends. The task that required the least visual ability was “walking alone in the corridor at school”; the task that required the most was “reading a textbook at arm’s length.” The estimated person measures of visual ability were linear with logarithm of the minimum angle of resolution (logMAR) acuity and the binocular high contrast distance visual acuity accounted for 32.6% of the variability in the person measure.

Conclusion: The LVP-FVQ is a reliable, valid, and simple questionnaire that can be used to measure functional vision in visually impaired children in developing countries such as India.

## **Causes of childhood blindness in the north-eastern states of India.**

Bhattacharjee S, Das K., et al (2008). Indian Journal of Ophthalmology, 56(6), 495–499.

### **Abstract**

Background: The northeastern region (NER) of India is geographically isolated and ethno-culturally different from the rest of the country. There is lacuna regarding the data on causes of blindness and severe visual impairment in children from this region.

Aim: To determine the causes of severe visual impairment and blindness amongst children from schools for the blind in the four states of NER of India.

Design and Setting: Survey of children attending special education schools for the blind in the NER.

Materials and Methods: Blind and severely visually impaired children (best corrected visual acuity <20/200 in the better eye, aged up to 16 years) underwent visual acuity estimation, external ocular examination, retinoscopy and fundoscopy. Refraction and low vision workup was done where indicated. World Health Organization's reporting form was used to code anatomical and etiological causes of visual loss.

Statistical Analysis: Microsoft Excel Windows software with SPSS.

Results: A total of 376 students were examined of whom 258 fulfilled the eligibility criteria. The major anatomical causes of visual loss amongst the 258 were congenital anomalies (anophthalmos, microphthalmos) 93 (36.1%); corneal conditions (scarring, vitamin A deficiency) 94 (36.7%); cataract or aphakia 28 (10.9%), retinal disorders 15 (5.8%) and optic atrophy 14 (5.3%). Nearly half of the children were blind from conditions which were either preventable or treatable (48.5%).

Conclusion: Nearly half the childhood blindness in the NER states of India is avoidable and Vitamin A deficiency forms an important component unlike other Indian states. More research and multisectorial effort is needed to tackle congenital anomalies.

### **Spectrum of visual impairment among urban female school students of Surat.**

Basu M., Das P. et al (2011). Indian Journal of Ophthalmology, 59(6), 475–479.

### **Abstract**

**Aim:** Eye morbidities with or without symptoms delineate a significant morbidity among adolescent schoolgirls in India. The study was undertaken to assess the extent of visual impairment and ocular morbidity to identify influencing factors and the impact on scholastic performance.

**Materials and Methods:** A population-based cross-sectional study was undertaken among 3002 urban girl students of Surat in Gujarat, India. Overall prevalence of refractive error was found to be 15.22%; myopia affected 91.47%, hyperopia 4.60%, and astigmatism 0.04%. The prevalence of myopia and astigmatism was more in higher age groups, while hyperopia was more in lower age groups; even students with good vision reported ophthalmic symptoms. Of all spectacle users, in 29.73% cases the eyesight was not found to be with the best possible corrections. Refractive error was observed to be higher among the general caste (50.98%) and among Muslims (54.05%). Still, among those with problems of eyesight, 75.93% students had good academic performance. Associated ocular morbidity was noted in 20.35% participants along with the refractive error.

**Conclusion:** This study highlighted the load of eye morbidities of adolescent Indian urban girls.

### **Screening for visual impairment: Outcome among schoolchildren in a rural area of Delhi.**

Rustagi N., Uppal Y. and Taneja. D.K (2012). Indian Journal of Ophthalmology, 60 (3), 203–206.

### **Abstract**

**Background:** Uncorrected refractive errors are the main cause of vision impairment in school-aged children. The current study

focuses on the effectiveness of school eye screening in correcting refractive errors.

Objectives: 1. To study the magnitude of visual impairment among school children. 2. To assess the compliance of students for refraction testing, procurement and use of spectacles.

Materials and Methods: An intervention study was conducted in schools of the north- west district of Delhi, in the rural field practice area of a medical college. Students studying in five government schools in the field practice area were chosen as the study subjects.

Results: Out of 1123 students enrolled, 1075 (95.7%) students were screened for refractive errors. Low vision (visual acuity  $< 20/60$ ) in the better eye was observed in 31 (2.9%) children and blindness (visual acuity  $< 20/200$ ) in 10 (0.9%) children. Compliance with referral for refraction was very low as only 51 (41.5%) out of 123 students could be tested for refraction. Out of 48 students, 34 (70.8%) procured spectacles from family resources but its regular use was found among only 10 (29.4%) students. The poor compliance among students stems out of various myths and perceptions regarding use of spectacles prevalent in the community.

Conclusion: Refractive error is an important cause of avoidable blindness among rural school children. Behavior change communication among rural masses by spreading awareness about eye health and conducting operational research at school and community level to involve parent's teachers associations and senior students to motivate students for use of spectacles may improve utilization of existing eye health services in rural areas.

