

## Visual Perceptual Abilities in Intellectually Disabled Children with and Without Attention Deficit Hyperactive Disorder

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**ABSTRACT:** The present study was conducted to find out the comparison between the visual perceptual ability of children with intellectual disability having ADHD problems and without having ADHD problem. On the bases of literature review it was hypothesized that visual perceptual ability will likely to be more disturb in children with intellectual disability co morbid ADHD problems as compare to 30 intellectual disable children without ADHD problems. A sample of 47 children already diagnosed in which 30 intellectual disable children co morbid ADHD and 17 intellectual disabled children without ADHD were selected from special school and hospitals of Karachi .Their age range from 6-10 years, and belongs to middle socioeconomic class. Draw A Person (DAP) test used to confirm the IQ to assess visual perceptual abilities was administered by Good enough (1926) was used for the IQ evaluation was used to assess the visual perceptual abilities. Bender Gestalt Test (BG) by Koppitz (1963) was administered. It was found that there was a significant difference in the visual perceptual ability in intellectually disabled (ID) children with Attention deficit disorder ADHD disorder then intellectual disabled without ADHD.(  $df = 45$   $t = 5.517$   $p < .000$ ). Recommendations for future avenues are also suggested.

**KEYWORDS:** Visual Perceptual Abilities, Intellectual Disability, Attention Deficit Hyperactive Disorder.

### 1 INTRODUCTION

Visual perception refers to the process of interpreting and organizing visual information. Visual perception includes understanding what you see, identifying it , judging its importance and linking it to previously stored information visual perception relates to visual memory, this means for example recognizing words that you have seen previously and using the eyes and brain to form a mental picture of the words you see.(wikipedia, 2002).

#### 1.1 1.1 COMMON AREAS OF DIFFICULTY AND SOME EDUCATIONAL IMPLICATIONS

This refers to the position of object in space. It also refers to the ability to accurately perceive objects in space with reference to other objects. Reading and math are two subjects where accurate perception and understating of spatial relationship are very important. Both of these subjects rely heavily on the use of symbols (letters, numbers, punctuation, math signs). Examples of how difficulty may interfere with learning are in being able to perceive words and numbers are separate units. directionally problems in reading and math, confusion of similarly shaped letters, such as b/d/p/q. this importance of being able to perceive objects in relation to other objects is often seen in math problems. To be successful, the person must be able to associate that certain digits go together to make single number (i.e.14). That others are single digit

numbers, that the operational signs (+, x, =) are distinct from the numbers, but demonstrate a relationship between the symbols. These activities presuppose an ability and understanding of spatial relationships.

*Visual discrimination:* This is the ability to differentiate objects based on their individual characteristics. Visual discrimination is vital in the recognition of common objects and symbols. Attributes which children use to identify are color, form, shape, pattern size and position. Visual discrimination also refers to the ability to recognize an object as a distinct from its surrounding environment. In terms of reading and mathematics, visual discrimination difficulties can interfere with the ability to accurately identify symbols, gain information from picture ,charts are be able to use the visually presented material in a productive way. The ability to recognize distinct shapes fro their background, such as objects in a picture, letters or chalkboard is largely a function of visual discrimination.

*Visual closure:* Visual closure is often considered to be a function of visual discrimination. This is the ability to identify or recognize a symbol or object when the entire object is not visible. Difficulty in visual closure can be seen in such school activities as when the young child is asked to identify, or complete a drawing of, a human face. This difficulty can be so extreme that even single missing facial features such as nose, eye, mouthy could render the face unrecognized by the child.

*Object recognition (visual agnosia) :* Many children are unable to visually recognize objects, which are familiar to them, or objects, which they can recognize through their other senses, such as, touch or smell. One school of thought about this difficulty is that it is based upon an inability to integrate or synthesize visual stimuli in to a recognizable whole. Another school of thought attributes this difficulty to a visual memory problem, whereby the person cannot retrieve the mental representation and the object itself. Educationally, this can interfere with child's ability to consistently recognize letters, numbers, symbols, words or pictures. This can obviously frustrate the learning process, as what is learned on one day may not be there, or not be available to the child, the next. In cases of partial agnosia, what is learned one day one forgotten one day two may be remembered again without difficulty one day three?

*The Gestalt theory:* The gestalt theory was based upon the numerous discoveries made by proponents of this approach. The Gestalt theorists strongly believed in the dynamic nature of perceiving and tendency for perception to tend towards coherent, meaning and simple solutions. The Gestalt demonstration of the emergent properties of stimulant interaction presents an important challenge to all future theories of visual perception. The decision of the Gestalt theorists to concentrate upon strong, reliable effects may provide a lesson for others who wish to make discoveries about perceptual system. Finally the phonological aspect of perception, which was such an important part of the Gestalt approach, is something that continuous to stimulate debate among contemporary theorists. (Gordon 2004).

## **1.2 INTELLECTUAL DISABILITIES**

Term used for mental retardation (DSM- IV—TR, APA, 2000 p.41) This is a condition in which there is delay or deficiency in all aspects of development, i.e. there is global and noticeable deficiency in the development of motor, cognitive, social, and language functions. This is the commonest form of developmental disability. In many ways, intellectual disabilities are also representative of developmental disabilities in general, in its causation, nature, and care.

## **1.3 EMOTIONAL DEVELOPMENT**

Erickson, (1950) expanded his focus to include other aspects of social experience in his theory of psychosocial development. He addressed the most important profound matters in all of our lives. The ability to trust others and on the world, autonomy and confidence in one's own skills, the discipline to apply ourselves and relational skills to share our lives with others. Erickson proclaimed I his theory that the landmark of health and adjustment equally important for all of us with and without intellectual disabilities.

## **1.4 COGNITIVE DEVELOPMENT**

Piaget (1896-1980) describes four stages of cognitive growth, sensory motor, preoperational, concrete operational and formal. For Piaget, development proceeded from immediate, simple and concrete forms of thoughts to increasingly logical, complex and abstract form. Child thoughts in each stage are different. Aw new skills and thoughts patterns are developed, the old assumption usually must be abandoned. This process is naturally involves some temporary confusion and discomfort

Fletcher (2000) found that the psychiatric disorders are also common in p-people who have retardation, effecting as many as 20 percent to 35 percent of that population.

People with intellectual disabilities may have higher incident of behavioral problems, including aggression, withdrawal, and other inappropriate behaviors (Dudley, Ahlgrim & Calhoun, 1999).

### 1.5 VISION AND ORAL HEALTH NEEDS OF INDIVIDUALS WITH INTELLECTUAL DISABILITY

Over the past 20 years there has been an increased emphasis on health promotion, including prevention activities related to vision and oral health, for general population not for individual with intellectual disability (ID). Owens & Kerker (2005) presented a rationale for the increased prevalence of these conditions in the context of service utilization, and examines the limitation of the available research. Available data revealed a wide range of prevalence estimates for vision problem and oral health conditions but all suggest that these are more prevalent among individual with ID compared with the general population, and disparities exist in the receipt of preventive and early treatment for these conditions for individuals with ID compared with the general population, and disparities exist in the receipt of preventive and early treatment of these conditions for these conditions for individual with ID.

### 1.6 ATTENTION DEFICIT HYPERACTIVE (ADHD)

ADHD is a common behavioral disorder that affects an estimated 8% to 10% of school-age children. Boys are about three times more likely than girls to be diagnosed with it, though it's not yet understood why. Children with ADHD act without thinking, are hyperactive, and have trouble focusing. They may understand what's expected of them but have trouble following through because they can't sit still, pay attention, or attend to details

ADHD used to be known as "attention deficit disorder", in (Gilliam 1994), it was renamed ADHD and broken down into three subtypes, each with its own pattern of behaviors:

*An inattentive type:* with signs that include:

- inability to pay attention to details or a tendency to make careless errors in schoolwork
- difficulty with sustained attention in tasks or play activities
- apparent listening problems
- difficulty following instructions
- problems with organization
- avoidance or dislike of tasks that require mental effort
- tendency to lose things like toys, notebooks, or homework
- distractibility
- forgetfulness in daily activities

*A hyperactive-impulsive type:* with signs that include

- fidgeting or squirming
- difficulty remaining seated
- excessive running or climbing
- difficulty playing quietly
- always seeming to be "on the go"
- excessive talking
- blurting out answers before hearing the full question
- difficulty waiting for a turn or in line
- problems with interrupting or intruding (Berkley 1981 )

People with ADHD find it difficult then others to manage their time due to attention problems inducing them to lack focus on the task in hand. Time pass quickly when their attention is slipped, they became easily distracted and may start to daydream. (Susan Young & Jessica Bramham, 2007).

### 1.7 PROBLEM SOLVING DIFFICULTIES

Failure in inhibitory control when confronted with the problem may lead to an individual with ADHD to response before the optimal solution has been generated a difficulty in delaying gratification may also leads ADHD adults to opt for a short cut. For individual with ADHD their problem solving abilities are often affected by executive functioning difficulties e.g. a

difficulty in organizing and sequencing the information. Their problem solving abilities are hindered by core cognitive impairments, such as deficit in response inhibition, working memory and attention. (Young & Bramham, 2007).

### **1.8 COMMON MEMORY PROBLEMS IN ADHD**

Misplacing things, e.g. forgetting where they have put their glasses, keys, forgetting appointments, deadlines and activities that need to be done in the future. Losing time not attending the time passing, or having the distorted sense of time resulting in them being late and not knowing where time has gone. Forgetting instruction, if someone tries to explain how to do a task they have to slow down and repeat it a number of times. (Young & Bramham, 2007)

### **1.9 VISUAL PERCEPTUAL ABILITIES IN INTELLECTUALLY DISABLED CHILDREN AND CHILDREN WITH CO MORBID ADHD PROBLEMS**

There are several researches that showed disturbed visual perceptual abilities in intellectual disabled, children with cerebral palsy and Down syndrome with and without ADHD problems. Semrud-Clikeman and Schafer (2008) conducted a research on **80** children with the presence or absence of hyperactive—impulsive behaviors. They were administered a battery of tests to determine whether the groups differed in their visual perceptual skills and fluid reasoning abilities. Their findings showed that the groups with poor<sup>social</sup> perception significantly differed from groups with intact social perception on the Rey-O and Fluid Reasoning but not on the Judgment of Line Orientation or the Developmental Test of Visual Motor Integration. It was further indicated that a subgroup of children with ADHD demonstrated poor social perception skills and accompanying deficits in complex visual perception and fluid reasoning.

Di Blasi, Elia, Buono and Ramakers(2007) conducted study to supports that the neurobiological hypothesis supports the relevance of studying visual-perceptual and visual-motor skills in relation to cognitive abilities in intellectual disabilities because the defective intellectual functioning in intellectual disabilities is not restricted to higher cognitive functions but also to more basic functions. The sample was 102 children 6 to 16 years old and with different severities of intellectual disabilities. Children were administered the Wechsler Intelligence Scale for Children, the Bender Visual Motor Gestalt Test, and the Developmental Test of Visual Perception, and data were also analyzed according to the presence or absence of organic anomalies, which are etiologically relevant for mental disabilities. Children with intellectual disabilities had deficits in perceptual organization which correlated with the severity of intellectual disabilities. Higher correlations between the spatial subtests of the Developmental Test of Visual Perception and the Performance subtests of the Wechsler Intelligence Scale for Children suggested that the spatial skills and cognitive performance may have a similar basis in information processing

Previously, Kozeis and Anogeianaki (2005) investigated visual function and perception in cerebral palsied (CP) children and their findings are: In the absence of severe mental retardation, CP children have deficient visual skills. It is suggested that the poor visual skills of CP children are a separate, identifiable factor compounding the adverse effects of mental retardation.

Shin, Kim & Kim (2003) examined the performance of Korean children diagnosed with attention-deficit hyperactivity disorder (ADHD), learning disorder, ADHD with learning disorder, and tic disorder on the Rey-Osterreith Complex Figure. The clinical group consisted of 57 children between the ages of 6 and 13 years (15 with ADHD, 13 with learning disorder, 15 with ADHD + learning disorder, and 15 with tic disorder), and the control group included 20 children recruited from an elementary school. Rey-Osterreith Complex Figure productions were scored according to the Developmental Scoring System. The children in the control group showed a clear developmental trend—organization score increasing with age—that was similar to the performance of American children. No such age-related effect was found in the three clinical groups. The organization scores of the children with ADHD were lower than those of other groups, suggesting an organizational deficit in ADHD. Performance on the immediate recall condition was poorest in the tic disorder and ADHD + learning disorder groups, suggesting the presence of nonverbal memory problems in those groups.

Jacobsen, Magnusson and Smith (1997) conducted a study to found that the Hidden visual capabilities in mentally retarded subjects diagnosed as deaf—blind The visual acuity of twelve multi-handicapped, mentally retarded subjects, diagnosed as deaf-blind, was measured on two occasions with the Teller Acuity Cards (TAC). Eight subjects scored above the criterion for legally blind and the results of six of these indicated various degrees of poor to approaching-normal eyesight. To evaluate high-level vision four subjects were tested with the Fagan Test, assessing visual recognition memory for faces subsequent to familiarization with the preferential looking technique. The results for three subjects showed evidence for perceptual recognition. It is concluded that TAC combined with the Fagan Test may detect perceptual capacities unnoticed by clinical observation

Jaun and Jean (1991) compared the performances of 28 cerebral palsied, 19 mentally retarded, and 30 normal children between the ages of 8 and 16 years on measures of four components of visual perception: figure-ground relationships, form

constancy, spatial position, and spatial relationships. The figure-ground component was tested tachistoscopically the components of form constancy and spatial positions were tested by means of the Developmental Test of Visual Perception; and spatial relations was tested by requiring each child to reproduce a geometrical pegboard design. Results showed that the cerebral palsied and mentally retarded Ss scored more poorly than normal children in each of the four visual perception components and that the cerebral palsied showed less ability in visual perception tasks than the mentally retarded. Findings supported the hypothesis that the components of visual perception are impaired in the cerebral palsied child.

Deutsch, Dube & McIlvane (2008) they provide a review of diagnostic controversies in ADHD with IDD, and discuss several topics that are currently attracting research efforts in this field. These include behavioral phenotype and attempts to come to grip with problems of behavioral and etiological heterogeneity. They considered issues related to methodologically sound assessment of attention disorders and evidence based intervention procedures that may clarify and meliorate attention deficit in individual with ADD.

Pitetti, Beets & Combs (2009) conducted a study to evaluate physical activity patterns of children with ID during three school settings: adapted physical education moderate-to-vigorous physical activity (MVPA) on most days of the week. Little is known about the activity level of school-age children with intellectual disabilities (ID). They found that through allocation of time for APE and RE, coupled with programming designed to maximize activity opportunities, students with ID can achieve recommended levels of MVPA.

Ruedrich, Dunn, Schwartz & Nordgren (2007) evaluated the confidence and willingness of resident graduates to treat individuals with intellectual disability (ID), following a residency rotation in developmental disability and found that the Psychiatric graduates appear to value specialized education and experience in working with ID patients during residency, and feel more confident as a result. In spite of this, the majority of resident graduates did not identify ID training or expertise to their practice community, or choose to work with ID patients following residency.

## **1.10 RATIONALE OF THE STUDY**

The main aim of the study is to investigate the visual perceptual abilities in children with special need. As this area is not well documented in our culture. There is need to rule out the differences of visual perception between children with intellectual disabilities (ID) having Attention Deficit Hyperactive Disorder (ADHD) problems and without ADHD problems. As noted in literature review that hyperactivity, inattention and impulsivity has an effect on visual perception. The findings of the research will be beneficial for psychologist in understanding the level of perceptual abilities of those children. That will further help in making treatment plans and rehabilitation activities in future. In the light of above mentioned literature review following hypothesis was framed.

## **1.11 HYPOTHESIS**

Visual perceptual abilities will be more disturbed in intellectually disabled children (ID) co morbid Attention Deficit Hyperactive Disorder (ADHD) as compared to with intellectual disabled children without Attention Deficit Hyperactive Disorder (ADHD).

## **2 METHODOLOGY**

### **2.1 SAMPLE**

A sample of 47 children with intellectual disability was selected taken from different especial school and hospitals of Karachi; they were further divided in to two equal groups; 30 children with intellectual disability with ADHD and 17 intellectual disabled children without ADHD. Their age ranged from 6-10 years. The whole sample was already diagnosis by the respective psychologists and psychiatrists who help in the selection.

## 2.2 RESEARCH DESIGN

Comparative study
<b>Children with intellectual disability</b>
(N = 30)
<b>Children with intellectual disability with ADHD</b>
(N =17)
<b>Administration of</b>
1. Bender Gestalt Test (Koppitz 1963)
2. Draw –A- person Test ( <a href="#">Good Enough</a> 1926)

## 2.3 MEASURES

*Draw-a-person test:* Developed originally by [Good enough](#) in 1926, this test was first known as the Good enough Draw-A-Man tests. The test can be used to calculate the IQ. It is comprised by 18 items. Its scoring age is 3-13 years.

Test administration involves the administrator requesting children to complete individual drawing on a piece of paper (i.e. 8) Children are asked to human figure drawing drawing. No further instructions are given and the child is free to make the drawing in whichever way he/she would like. There is no right or wrong type of drawing, although the child must make a drawing of a whole person each time - i.e. head to feet, not just the face. The test has no time limit; however, children rarely take longer than about 10 or 15 minutes to complete all three drawings. Harris's book (1963) provides scoring scales which are used to examine and score the child's drawings. The test is completely non-invasive and non-threatening to children - which is part of its appeal. The purpose of the test is to assist professionals in inferring children's cognitive developmental levels with little or no influence of other factors such as language barriers or special needs. Any other uses of the test are merely projective and are not.

*Bender gestalt test:* Koppitz (1963) The Bender Gestalt Test, or the Bender Visual Motor Gestalt Test, is a psychological assessment instrument used to evaluate visual-motor functioning and visual perception skills in both children and adults. Scores on the test are used to identify possible organic brain damage and the degree maturation of the nervous system. The Bender Gestalt was developed by psychiatrist Lauretta Bender in the late nineteenth century.

The Bender Gestalt Test lends itself to several variations in administration. One method requires that the examinee view each card for five seconds, after which the card is removed. The examinee draws the figure from memory. Another variation involves having the examinee draw the figures by following the standard procedure. The examinee is then given a clean sheet of paper and asked to draw as many figures as he or she can recall. Last, the test is given to a group, rather than to an individual (standard administration). It should be noted that these variations were not part of the original test. (Grune & Stratton 1985)

## 2.4 RELIABILITY

The results involving the Bender-Gestalt Test with young children reveal inter-scorer reliability to be very high with correlations of .90 and above. Test-retest reliability coefficients with children range from a low of about .50 with kindergarten children measured 8 months apart to .90 and above. Test-retest reliability coefficients with children range from a low of about .50 with kindergarten children measured 8 months apart to .90 with the same age group measured two weeks apart. The majorities of more than 20 different reliability studies reported by Koppitz reveal correlation coefficients in the .80+ range and suggest that normal elementary school children show relatively stable patterns of Bender-Gestalt Test scores from one administration to the next. (Piotrowski, 1995).

## 2.5 PROCEDURE

In order to conduct the research and collect the data different especial education institute, rehabilitation centers and hospitals of Karachi were visited according to the study. A letter of consent describing the research project was provided to the concerned authorities, meetings was conducting with the head of departments in order to take permission, the purpose

of the study was described in details, after getting the permission the participants and their teachers were approached, then they also brief about the purpose of research and consent was taken. All ready diagnosed cases of mild and moderate intellectually disabled children with and without ADHD were selected purposefully.

Initially the researcher was established a rapport with the teachers and told them the purpose of the study in order to get required sample that is 30 mild and moderate intellectual disabled children without ADHD and 30 intellectually disabled with ADHD. However there was a difficulty in approaching this sample in special schools, then the sample was reduced to 17 intellectually disabled children with ADHD that was available. The diagnosis of intellectually disabled children was further conform by the administration of Draw a Person Test (DAP) by Good Enough (1926) on all participants. However, ADHD problems in intellectually disabled children were already diagnosed by the psychiatrists. Most of cases of intellectually disabled children with ADHD were taken from NICH, Karachi. After the selection of sample, the Bender Gestalt Test (BG) would be administered to find out the visual perceptual ability of special children.

## 2.6 SCORING AND STATISTICAL ANALYSIS

Scoring of Draw A Person Test was done by Good enough method and IQ scores were derived by applying the formula  $IQ = \text{mental age} / \text{chronological age} \times 100$ . While the scoring of bender Gestalt test was done according to the method off given by koppitiz (1963) and raw scores were take for further analysis, t-test for independence mean was computed by SPSS (statistical package of social sciences version 12.0).

## 2.7 OPERATIONAL DEFINITION

*Intellectual disability (ID):* Intellectual disability is defined by American Psychological Association (APA, 2000) intellectually disabled are those children who have low intelligence in comparison with normal children. E.g. 70 and below IQ level. This is a condition in which there is delay or deficiency in all aspects of development, i.e. there is global and noticeable deficiency in the development of motor, cognitive, social, and language functions.

*Attention deficit hyperactive disorder (ADHD):* According to the American psychiatric association (1994). The essential features of Attention Deficit/Hyperactivity disorder is a persistent pattern of inattention, impulsivity, and hyperactivity that is more frequent and sever then is typically in individuals at a comparable level of development.

*Inattention:* Inability to pay attention to details or a tendency to make careless errors in schoolwork or other activities

*Hyperactivity:*

- Excessive talking
- Blurting out answers before hearing the full question (Berkley 1981)

*Impulsivity:* Assess the problem of inhibiting the behavior and delaying making a response, e.g. Act before thinking.

## 3 RESULT

Present study was conducted to find out the visual perceptual ability in special children, from the literature review of the different educational institutes of the world it has been observed that the Intellectually Disabled children with the Attention Deficit Hyperactive disorder is more disturbed rather than the children who does not have other problem, except intellectually disabled. Many researches indicates that the perception ability play an important role in the performance of special children. A visual processing or perceptual disorder refers to a hindered ability to make sense of information taken in through the eyes. This is different from problem solving sight or sharpness of vision. Difficulty with visual processing affects how visual information is interpreted or processed by the brain. When these ability is not developed according to the age and capacities of individual they tend to have the chances of become performance a low level because the ability to integrate the things that were perceived by vision is need to be processed well and accurately. Individual with low IQ must have capacity to learn about the copying, drawing and other practical skills but their behavioral problems such as hyperactivity and inattention effects this learning or performance ability negatively. If they have co morbid Attention Deficit Hyperactive Disorder, it became more so disturbance, hence the investigation in this specific area of nuro psychologist gain importance. These findings would be helped for diagnosis special structure and psychiatric for making screening and diagnosis. Considering all these issues the visual perceptual disturbance in especial children, the present study was designed. The results are consisted with the researches done in other institutes of the world.

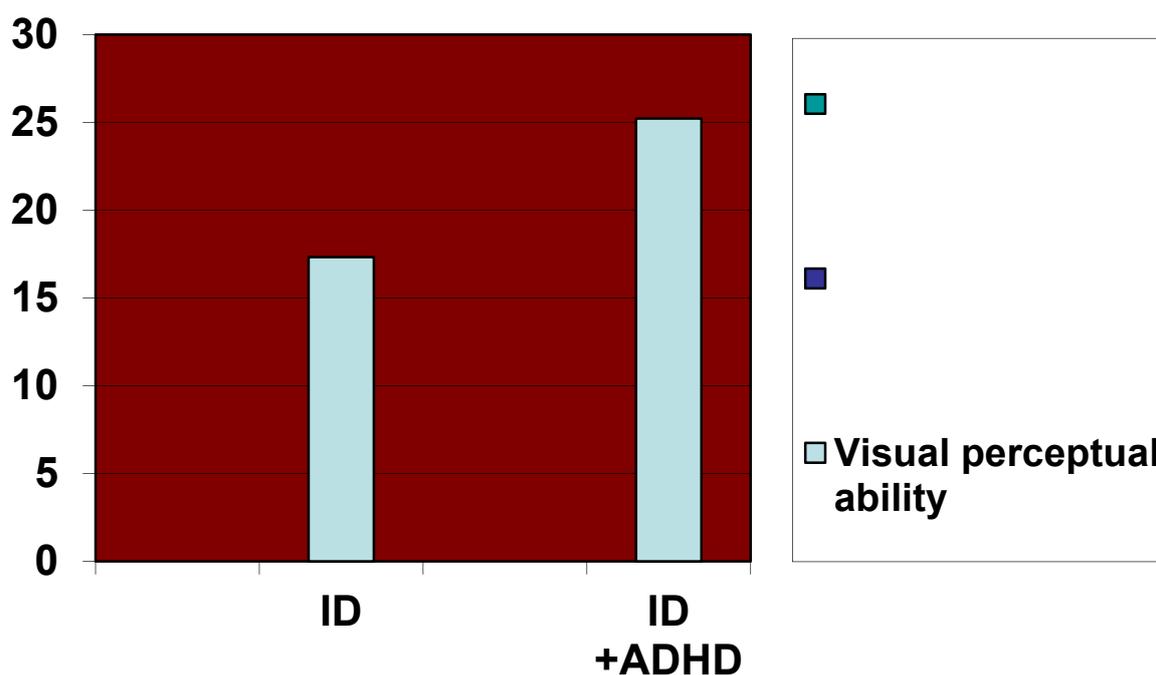
Table 1. Mean scores of visual perceptual ability of children with Intellectual Disability (ID) with and without Attention deficit hyperactive disorder (ADHD)

Groups	N	M	SD	SEM	t	Level Of sig.
Children with ID	30	17.33	4.89	.89	-5.517	p< .000
Children with ID and ADHD	17	25.23	4.38	1.06		

Table 1 showed when children with intellectual disability co morbid Attention Deficit Hyperactive Disorder is statistically (P<.000) more disturbance in visual perceptual area as compare to intellectually disabled children without ADHD.

**Graph**

Showing that the visual perception ability is more disturbed in intellectually disabled children with ADHD problems.



Graph A showed the mean score at Bender Gestalt Test by children with intellectually disabled with and without without ADHD.

**4 DISCUSSION**

Intellectual disability is not a disease or illness but it is a group of recognized characteristics .People throughout history has noticed that some individual did not appear to learn, solve problems, developed language and otherwise behave at the level or in the manners that was expected at time. (Harnadek, 1991).

Specific personality and behavioral features are uniquely associated with intellectual disability. Some individual with intellectually disable are passive and dependent and some others are aggressive and impulsive. Such cases are higher in almost all countries of the world and studies have been done over this sensitive area of population of our society. It is a standard way to understand a child with intellectually disabled when there is significantly below average intelligence and prominent impairment in their adaptive functioning, but there are some other factors of such individual are the focus of attention. They can be neglect persons; have depressed mood, irritability and feelings of insecurity with the present environment.

The most common associated intellectual disability is Attention Deficit Hyperactive Disorder (ADHD). The individual often has double diagnosis reflect a unique pattern if poor performance and behavioral disturbances. Such children are highly

disturbed in integrating the perceived things, recognizing and differentiation among objects. Each individual has their own unique strengths and weaknesses. I believe that in life, we all need to learn to improve our weak areas to an acceptable standard, compensate for them where necessary while focusing on, developing and enjoying our strengths and talents.

The individual who are intellectually disabled and as well as behavioral problems such as impulsivity, attention and hyperactivity are failed to problems such as impulsivity, attention and hyperactivity are failed to achieve the all potential in the areas of attention, copying and joining the presented stimuli. These individual have ability to perceive well and recognizes the stimuli in the present environment but they cannot recognized and interpret well because the children with ADHD act without thinking, are hyperactive, and have trouble focusing. They may understand what's expected of them but have trouble following through because they can't sit still, pay attention, or attend to details.

On the Bender Gestalt Test the intellectually disabled children with ADHD showed poor performance. The children have higher raw scores on test than the intellectual disabled children without ADHD problems. The Bender Gestalt Test is used to evaluate visual maturity, visual motor integration skills, style of responding, and reaction to frustration, ability to correct mistakes, planning and organizational skills, and motivation. Copying figures requires fine motor skills, the ability to discriminate between visual stimuli, the capacity to integrate visual skills with motor skills, and the ability to shift attention from the original design to what is being drawn.

The above results that are shown in the table and graph are rightly proved the hypothesis that the visual perceptual abilities are more disturbed in intellectually disabled children with ADHD problems. Such children do not pay attention to the presented stimulus such as the test cards they were asked to copy and they understand that what they have to do but their impulsivity constantly shift their attention towards the other things in the environment and their low intelligence play a negative role. They failed to understand what they have to do. They started to copy the designs but did not focused on it and one thing more that are observed that these children refuses to copy the material and in order to quit the situation they complained that they cannot make anything, their higher energy level does not allow them to do a specific task at one time. They started to copy the design and tried to draw the proper pattern but they have no control over their behavioral. Rapport building is most necessary in order to make them to do test

## 5 LIMITATION AND RECOMMENDATION

In the present research it is tried to see all the related issues which can be included but instead there are many issues that are still untouched it is guided to work further on these areas in the new researches.

- This study was conducted on intellectually disabled children with and without attention deficit hyperactive disorder; further studies should also be done on the autistic children with behavior problems.
- The selection of educational institutes was good but the absence of a professional psychologist in the special centers created difficulty to select the children with behavioral problems. Their teachers were well trained in teaching education but lack of knowledge in identifies the behavioral issues and their modification.
- The performance is lack in children with ADHD problems is also severe due to lack of their exposure with paper pencil work and strict behavior of children and their parents due to lack of understanding.
- Further studies should also be conducted on the related variables such as school grade and gender differences.
- The size of sample should be decreased in the further studies if it will conduct on the same sample.
- The affects of school and center environment and the socioeconomic status of parents also effects on the achievements and performance qualities if special children.

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