

Emotional Indicators on Human Figure Drawing Test of Mentally Retarded Children with and without Hyperactivity

Shazia Hasan*

COMSATS, Institute of Information Technology, Lahore Pakistan

Ummara Rauf and Noreen Begum

Institute of Clinical Psychology, University of Karachi, Karachi

The aim of the present study was to investigate the emotional indicators in the Human Figure Drawing of mentally retarded children with and without hyperactivity. It will help in finding out the emotional expression of mentally disabled children. The design of the study is descriptive. It was hypothesized that mentally retarded children with hyperactivity would score high on emotional indicators of Human Figure Drawing Test (HFD) as compared to mentally retarded non hyperactive children. A purposive sample of 60 mentally retarded children 30 with mild, and moderate severity and with hyperactivity and 30 with mild and moderate severity and without hyperactivity with the age range of 6-18 years, was taken from special schools of Karachi city. Human Figure Drawing Test (HFD) was applied to evaluate emotional problems and Attention-Deficit/ Hyperactivity Disorder Test (ADHD - T) was applied to explore the hyperactivity of the mentally retarded children. The percentage method of descriptive statistics was applied for statistical analysis. The results show that mentally retarded children with hyperactivity have more emotional problems than mentally retarded children without hyperactivity.

Keywords: Emotional indicators mentally retarded, hyperactivity, mild and moderate severity

*Correspondence concerning this article should be addressed to Dr. Shazia Hasan, COMSATS, Institute of Information Technology, Lahore, Pakistan. E-mail: shazian36@yahoo.com

Emotional disturbances and psychological problems in mentally retarded children is one area which effects their adjustment in school and life in general. Mental retardation is the term used for disorders of intellectual functioning that should be significantly below the average, that is, approximately or less than 70 after administering a standard test that measures intelligence. The current adaptive functioning of the client must be impaired or must show some deficit. DSM IV categorizes adaptive functioning into different areas such as “care about one himself, communication, home living, relationship with others, and uses of resources of community, self-direction, functional in academic area, in work, health, safety and leisure”. Two of the areas of adaptive functioning are impaired and it shows early symptoms before the age of 18 years (DSM- IV- TR, 2000).

Four subtypes of mental retardation are also categorized on the basis of the severity of the deficit and the intensity of the level of intellectual functioning of the individual. Mild mental retardation is one where the IQ level is 50 – 55 to more or less than 70. In moderate mental retardation the IQ level is 35 – 40 to 50 – 55. In severe mental retardation 20 – 25 to 35 – 40 is the range of an individual’s IQ level. Profound mental retardation includes IQ level below 20 or 25. When the intellectual functioning of the individual is not measured by the standard tests that are particularly aimed for the testing of IQ levels, but there is strong assumption of deficit in intellectual functioning, it is categorized as another type of mental retardation known as severity unspecified (DSM IV TR, 2000).

The most recent American Association on Mental Retardation (AAMR) definition of ‘mental retardation’ (2002) states: “Mental retardation is a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18”.

However the term mental retardation has been replaced by the term of intellectual disabilities. WHO (2007) collected data from 147 countries to know about the common terminologies used in different countries associated with the mental retardation. It is found that 76% of the country’s most common term is “mental retardation”, 57% of them use the term “intellectual disability”,

whereas mental handicap or disability term is common in 40% of the countries. Learning or developmental disabilities, mental deficiency or sub normality; are terms used by some other countries.

Intellectual disability which is also known as intellectual developmental disorder is the impairment in general mental functions. These general mental functions include “reasoning, problem solving, planning, abstract thinking, judgment, learning from experience, and practical understanding.” Adaptive functioning impairment is also under consideration and these adaptive functions are categorized into different areas such as the academic or conceptual area, the social area, and the functional area. Subtypes of intellectual disability are specified by the levels of severity of intellectual functioning in three domains of adaptive functioning (DSM 5, 2013).

Causes of mental retardation are unknown but in 25% cases of mental retardation, the causes are known. Causes of mental retardation mentioned in Psychology Today (2010) include any trauma such as loss of oxygen, exposure to alcohol, or injection before or during the birth of the child. Genetic abnormalities are another cause of mental retardation which can lead to chromosomal abnormalities such as the ones found in Down’s syndrome; abnormal genes present during the neonatal period; fragile X syndrome; and phenylketoneuria. Poisoning of mercury or lead, issues related to diet, or severe undernourishment, getting sick in early childhood such as whooping cough, measles, or meningitis (Psychology Today, 2010).

A study conducted in Pakistan by Durkin, Hasan and Hasan (1998) reveals that the lack of mother’s education is a factor that is strongly linked with serious and mild mental retardation. Some other factors depicted in this study are problems faced before birth, infections at the time of birth, infections in the brain after birth, traumatic brain injury and malnutrition. There is also an association between poverty and mental retardation among children and is a risk factor of mental retardation (Emerson, 2007). Additionally, somatogenic causes are linked with mental retardation in children (Bannikova & Sebirzianov, 2013).

According to DSM 5 (2013), the prevalence of intellectual disability is 1% with reference to the overall general population. Rates of prevalence vary by age. Approximately 6 per 1000 is the prevalence rate of intellectual disability, severe level. Spiebl, Binder, Cording, Klein, and Spiebl (2008) conducted a study between 1996 and 2002 on 9727 patients in a psychiatric hospital having first admission. According to ICD 10, 2% (192 patients) are diagnosed with mental retardation. Findings also reveal that 62%, 26% and 9% of the patients suffered from mild, moderate and severe mental retardation respectively.

Prevalence of mental retardation in Pakistan is given in the study of Durkin, Hasan and Hasan (1998). The aim of the study was to find out the prevalence of mental retardation among Pakistani children. Results indicate that 19.0 per 1000 children are estimated to be a part of the prevalence rates for severe mental retardation whereas 65.3 per 1000 are included in the category of mild mental retardation.

Recently, the research and development department of Helping Hand for Relief and Development (HHRD) Islamabad Pakistan (November, 2012) has developed a resource document on the statistics of people with disabilities in Pakistan. Disability is categorized into subtypes in this resource book such as crippled, multiple disabilities, blind, mentally retarded, deaf and insane. The total rate of disability in Pakistan is 2.54%. Among all types of disabilities, the population with mental retardation constitutes about 7.62% of the total population with disabilities.

Mental retardation is the condition that always remains at a high risk of mental disorders by association and psychopathology. This is also supported by some of the researches on the topic (Stromme & Diseth, 2000). Further Kerker, Owens, Zigler and Horwitz (2004) concluded that the prevalence of psychiatric disorders is greater in individuals with mental retardation as compared to those studies carried out on administrative data or based on data from different institutions. Common disorders in children with mental retardation are attention deficit hyperactive disorder, developmental disorder, autism, behavioral disorders and cerebral palsy (Shea, 2006).

Human Figure Drawing is used in this study to measure the emotional indicators of children with mental retardation and with

and without hyperactivity. Several researches with reference to interpretation of Human Figure Drawing are reported by different researches. One of the most commonly used techniques to evaluate emotional states of children is the Human Figure Drawing (Hibbard & Hatman, 1990; Cates, 1991). It is also assumed by Koppitz (1968), that the drawing of a human figure is a manifestation of the representation of the self of the child. Malchiodi (1998) depicted that drawings are believed to be unique statements of a person that characterize both their conscious and unconscious implications of their inner worlds. Good enough (1926) explained that there are some aspects related to HFD of children that are not related to intellectual maturity of children but appeared to be more related with personality of children. The diagnostic and interpretative nature of drawings is not for interpreting cognitive functioning but for the emotional conditions. Whatever a child draws would be related to the real self or the ideal self or to some people who are important in his life (Hammer, 1958). DiLeo (1973) assumed that those children who do not have anxiety and are adjusted well, their drawings will not reflect their self but it would indicate the conception of humankind. Similarly Koppitz (1986) believes that children will draw those who are important to them and HFD regards the illustration as the self concept of the one drew the figure.

Dekker, Koat, Van den Ende and Verhulst (2002) examined high scores on the depression scale, anxiety scores and somatic complaints in children with mental retardation as compared to children without mental retardation. Problems related to the social domain, problems with attention, problems related to aggression are the most prominent behavioral problems found in educable children with mental retardation.

Emotional problems are also viewed in few researches as seen in a study aimed at examining suicidal behavior of patients with mental retardation who were admitted in psychiatric hospitals. Results reveal that there is statistical significance in attempting suicides and it depends on the level of severity of mental retardation. Additionally, the way they attempt suicide depicted in this study is by injuring the self (Bobinska, Florkowski, Amigielski, & Galecks, 2009a).

There are several factors that are associated with the probability of psychiatric problems or psychopathology among children with mental retardation/intellectual disability. Emerson (2003) conducted a study to know about the prevalence of psychiatric disorders. Results also revealed the factors linked with greater possibility of disturbance in psychiatric conditions among children with mental retardation or intellectual disabilities, include sex, age, deficiency of social skills, family composition, number of life events that remain possibly stressful, psychological condition of the of the child's caretaker, functioning of the family and practices carried out for the management of the child. Some of the other risk factors of psychopathology in children with mental retardation are related to the development of language and its impairment; social deprivation; living with single (biological / natural) organic parent; whose parents belongs to lower socio-economic class; and inadequacy of adaptive behaviors (Koskentausta, Livanainen & Almqvist, 2007).

With the reporting of the prevalence of mental retardation among the universal population, a vital concern arises in the minds of researchers and clinicians related to the means by which this existing problem can be managed. Being clinicians we are required to create various ways to make these individuals become independent and live in society. Some of the contributions for enhancing the functioning of those with mental retardation have been suggested in a few researches. Researchers have discovered a relationship in employed and unemployed individuals with mental retardation, with respect to their cognitive and adaptive functioning. Results show considerably improved performance among individuals who were employed, on different subscales such as memory, attention, verbal comprehension, visual perception, and adaptive behavior (Su, Lin, Wu, & Chen, 2008). Similarly, Pratt and Greydanus (2007) also investigated intellectual disability/mental retardation and meaningful strategies for those clinicians who are primary caregivers and are responsible to care for these children and adolescents. According to them if individuals have gone through suitable personalized support in their lives over a continued period of time, particularly during the years that are influential in their lives; most of the youth as adults can live independently or semi-independently.

Based on the detailed literature review outlined earlier, the aim of the present study was to investigate emotional problems among mentally retarded children without hyperactivity and mentally retarded children with hyperactivity. Hyperactivity in children with mental retardation is therefore seen as associated with other emotional problems.

Method

Participants

The present study was conducted in various special and normal schools of Karachi. The sample consisted of 60 mentally retarded children and was divided into two groups. The first group comprised of 30 children with mild and moderate mental retardation with hyperactivity, while the other group comprised of 30 children with mild and moderate mental retardation and without hyperactivity. The age range was between 6 to 18 years. They belonged to the lower, middle and upper socioeconomic class.

Measures

Demographic Data Sheet was designed asking the information about the child's name, educational level, number of siblings, birth order, father's name and education, family system, socioeconomic class, any other sibling with special needs, duration of school, and any other treatment either medical or psychological.

Human Figure Drawing (Koppitz, 1968) is used to measure the emotional indicators in children with mental retardation with hyperactivity and without hyperactivity. Human Figure drawing (HFD) involves the drawing of a whole person by the child on the examiner's request. This test has no time limit but most of the subjects complete their drawing within 10 minutes whereas a few will complete it in just 1 or 2 minutes. It is applied on children between the ages of 5 to 12 years. There are two different objective signs of this drawing with reference to its scores. One is related to the age of children and their maturation level and these signs are known as Developmental Items. Another is related to attitudes and concerns of the children and these signs are called Emotional Indicators. Koppitz (1968) determined the

reliability of HFDs for emotional indicators. A total of 467 items for drawing were checked by two examiners. 95% (444 items) of the items were scored by both examiners and only 5% were checked by only one or other of the investigators. 19 items were scored for each drawing. There were only one or two point differences between both examiners on the scoring.

Attention deficit hyperactivity disorder test (Gilliam, 1995) was used to measure hyperactivity in children with mental retardation. It is a checklist that is used to categorize individuals with the attention deficit hyperactivity disorder and its purpose is to assess persons who are referred for the behavioral problems. It has 36 items that illustrate the behaviors and characteristics of the person. It is used for the persons with the age range of 3 to 23.

ADHD-T is designed for usage in homes and schools by teachers and professionals. It requires 5 to 10 minutes for its administration. Respondents rate the extent of behavior to which each statement describes them on a scale from 0 to 2 (0= not a problem, 1= mild problem and 2= severe problem). There are three subtests of ADHD-T a. hyperactivity subtest b. impulsivity subtest c. inattention subtest. Cronbach's coefficient alpha (1951) was used to investigate the reliability of internal consistency on 754 ADHD subjects from the normalization sample. All correlations are above .90 and show a strong estimate of internal consistency.

Procedure

In order to conduct the research and collect data, different special schools were visited according to the convenience and purpose of the study. A letter of consent describing the research project was provided to the concerned authorities of special schools along with the demographic form and questionnaire. After getting the required permissions, participants and their teachers were approached. The researcher established rapport with the teacher and told them the purpose of the study in order to get the required sample that is 30 mentally retarded children without hyperactivity and 30 mentally retarded children with hyperactivity. With the help of teachers, instructions were given to the children. Many children with mental retardation were able to draw without any help and but many of them who had no exposure of drawing

were first shown the nature of the drawing by sketching and then they were asked to draw the figure. Attention Deficit Hyperactivity Disorder- Test was administered to the teachers. After collecting the whole data all the scales were analyzed through standard manuals.

Results

In order to interpret the results, the Human Figure Drawing was scored according to the standard procedure given in the manual. Frequency distributions and the percentage method of descriptive statistics was applied to assess the emotional indicators and hyperactive behavior. Emotional indicators on HFDs can differentiate between the drawings of mentally retarded hyperactive children and mentally retarded children. The mentally retarded children with hyperactivity showed a wide variety of emotional problems and symptoms thus confirming the assumption that they are more emotionally disturbed. Overall results showed that out of 30 emotional indicators, the mentally retarded hyperactive children scored high on 08 emotional indicators as compared to mentally retarded children. Such a result is indicative of high emotional disturbance.

The results have been further categorized into three categories of emotional indicators. First category relates to the qualitative signs (table 2) that include poor integration, shading on face, shading on body, shading on hands, asymmetry, slanting figure, tiny figure, big figure, transparency. The second category is of special features (table 3) with tiny head, crossed eyes, teeth, short arms, long arms, arms clinging to the body, big hands, hands cut off, legs pressed together, genitals, monster, three figures, and clouds. Last one is omissions (table 4) and it is explained by no eyes, no nose, no mouth, no body, no arms, and no legs.

Table 1
Frequencies and Percentages of Different Emotional Indicators on HFDs of Mentally Retarded Hyperactive Children and Mentally Retarded Non Hyperactive Children

Items	Emotional Indicators	<u>Mentally Retarded Hyperactive</u>		<u>Mentally Retarded Non Hyperactive</u>	
		children (n= 30)		children (n= 30)	
		f	%	f	%
1	Poor integration	29	96%	19	63%
2	Shading on face	0	0%	0	0%
3	Shading on body	2	6%	0	0%
4	Shading on hands	0	0%	0	0%
5	Asymmetry	30	100%	29	96%
6	Slanting figure	8	26%	7	23%
7	Tiny figure	5	16%	5	16%
8	Big figure	0	0	3	10%
9	Transparency	0	0	0	0
10	Tiny head	1	3%	1	3%
11	Crossed eyes	0	0	2	6%
12	Teeth	1	3%	4	13 %
13	Short arms	12	40%	9	30%
14	Long arms	1	3%	6	20%

15	Arms cling to body	1	3%	0	0%
16	Big hands	0	0%	1	3%
17	Hands cut off	29	96%	16	53%
18	Legs pressed Together	0	0%	0	0
19	Genitals	0	0%	0	0
20	Monster	0	0%	0	0
21	Three figures	0	0%	0	0
22	Clouds	0	0%	0	0
23	No eyes	0	0%	1	3%
24	No nose	0	0%	5	16%
25	No mouth	0	0%	1	3%
26	No body	4	13%	1	3%
27	No arms	2	6%	3	10%
28	No legs	2	6%	0	0%
29	No feet	6	20%	4	13%
30	No neck	11	36%	6	20%

26	No body	4	13%	1	3%
27	No arms	2	6%	3	10%
28	No legs	2	6%	0	0%
29	No feet	6	20%	4	13%
30	No neck	11	36%	6	20%

Table 2

Frequencies and Percentages of Quality Signs on HFDs of Mentally Retarded Hyperactive Children and Mentally Retarded Non Hyperactive Children

Items	Emotional Indicators	<u>Mentally Retarded Hyperactive children (n= 30)</u>		<u>Mentally Retarded Non Hyperactive children (n= 30)</u>	
		f	%	f	%
1	Poor integration	29	96%	19	63%
2	Shading on face	0	0%	0	0%
3	Shading on body	2	6%	0	0%
4	Shading on hands	0	0%	0	0%
5	Asymmetry	30	100%	29	96%
6	Slanting figure	8	26%	7	23%
7	Tiny figure	5	16%	5	16%
8	Big figure	0	0	3	10%
9	Transparency	0	0	0	0

Referring to table 2 it can be seen that mentally retarded hyperactive children showed more emotional indicator of Poor Integration (Item No.1) (96%) as compared to mentally retarded children (63%), a feature that appears to be associated with instability, a poorly integrated personality, poor coordination, and an overtly aggressive and impulsive nature.

Mentally retarded hyperactive Children showed higher scores on the emotional indicator of asymmetry (Item No. 5) (100%) than mentally retarded children (96%) indicating their poor coordination, and impulsiveness.

Mentally retarded hyperactive children also showed high frequency on the emotional indicator of slanting figure (Item No. 6) (26%) as compared to mentally retarded children (25%). This indicates that they are more instable and insecure.

Table 3

Frequencies and Percentages of Special Features on HFD of Mentally Retarded Hyperactive Children and Mentally Retarded Non Hyperactive Children

Items	Emotional indicators	<u>Mentally Retarded Hyperactive children (n= 30)</u>		<u>Mentally Retarded Non Hyperactive children (n= 30)</u>	
		f	%	f	%
10	Tiny head	1	3%	1	3%
11	Crossed eyes	0	0	2	6%
12	Teeth	1	3%	4	13 %
13	Short arms	12	40%	9	30%
14	Long arms	1	3%	6	20%
15	Arms clinging to body	1	3%	0	0%
16	Big hands	0	0%	1	3%
17	Hands cut off	29	96%	16	53%
18	Legs pressed Together	0	0%	0	0
19	Genitals	0	0%	0	0
20	Monster	0	0%	0	0
21	Three figures	0	0%	0	0
22	Clouds	0	0%	0	0

Table 3 shows that there is also a high frequency of responses on the emotional indicator of hands cut off (Item No. 17) (96%) among mentally retarded hyperactive children as compared to mentally retarded children (53%). This appears to be associated with feelings of inadequacy or guilt over failure.

There is also a high frequency on the emotional indicator of short arms (Item No. 13) (40%) among mentally retarded hyperactive children as compared to mentally retarded children (30%) which indicates they have more difficulty in reaching out into the world, and tendency to withdraw.

It is further noted that only 3% of mentally retarded hyperactive children made their drawings with the emotional indicator of teeth (Item No. 12) whereas (13%) mentally retarded children showed this indicator. This indicator reflects oral aggression.

Table 4

Frequencies and Percentages of Omission Responses on HFD of Mentally Retarded Hyperactive Children and Mentally Retarded Non Hyperactive Children

Items	Emotional Indicators	<u>Mentally Retarded Hyperactive children (n= 30)</u>		<u>Mentally Retarded Non Hyperactive children (n= 30)</u>	
		f	%	f	%
		23	No eyes	0	0%
24	No nose	0	0%	5	16%
25	No mouth	0	0%	1	3%
26	No body	4	13%	1	3%
27	No arms	2	6%	3	10%
28	No legs	2	6%	0	0%
29	No feet	6	20%	4	13%
30	No neck	11	36%	6	20%

Table 4 indicates that there is also high frequency of the emotional indicator of nobody (Item No. 26) (13%) among mentally retarded hyperactive children as compared to mentally retarded children (10%) which indicates their psychopathology, severe immaturity, and emotional disturbance with acute body anxiety.

20% of mentally retarded hyperactive children made their drawings without feet (emotional indicator, Item No. 29) as

compared to mentally retarded children (13%) which can be related to feelings of insecurity, and helplessness. There is also a high frequency of responses related to the emotional indicator of no neck (Item No. 30) among mentally retarded hyperactive children (36%) as compared to mentally retarded children (20%) a factor that is related to immaturity, impulsivity and poor inner control. This difference reflects that those who are mentally retarded are also somewhat immature and have poor inner control.

Discussion

According to ICD – 10, clinically dual diagnoses are found in about 10% of the sample with mental retardation than the other population (Kishore, Nizarie, Nizamie & Jahan, 2004). Similarly, it has been estimated that between 48% and 70% of individuals with mental retardation have diagnosable psychiatric disorders (Szymanski, Madow & Mallory, 1990). If these problems are not managed properly, they get strengthened. Most of the children with mental retardation visit psychiatrists for their problems who are not trained in the field of mental retardation or related problems. They have less or no exposure to training about the diagnostic and therapeutic intervening techniques posed by mental retardation (APA, 1995). Sometimes families or care givers of mentally retarded children not trust doctors and prescribed medicines when they are referred for treatment (Szymanski, Madow & Mallory, 1990; Lipman, 1986). Individuals with MR are most influentially provided by psychiatrist when they use the multidisciplinary team model (Hauser, 1997).

Overall results indicate that mentally retarded hyperactive children show more emotional and behavioral problems (hyperactive and impulsive behavior) in multiple settings whether the location is at home or at school. As shown in table 2, the poor coordination of mentally retarded children with hyperactivity is due to their inattention and impulsive behavior. It seems to be unable for them to concentrate on a task for a long time; they fed up with one activity and try to indulge themselves in another one abruptly. They soon lose their interest in one activity that's why they always remain in a state of shifting from one activity to other and in turn cannot perform a task adequately and have difficulty in integrating objects. Hyperactivity and impulsive behavior is also

supported by several researches as it is depicted in the results. Silka and Hauser (1997) have explained some of the changes that take place in the mental status of mentally retarded individuals. These include “hyperactivity or irritability, confusion or distortion, lethargic or withdrawal, psychotic symptoms, other changes in mood, energy and sleep patterns”. Sappok, Diefenbacher, Bergmann, Zepperitz and Moren (2012) observed three categories of EDD. First category includes showing self-injury, social withdrawal, and stereotyped behaviors. The second category includes the disintegrative disorder and the third shows hyperactivity, and attention seeking behavior.

At home they usually fail to complete chores, homework and other related activities, fail to follow directions, and are not able to play for prolonged periods without supervision or attention from others.

At school they usually have problems attending to the teacher and completing in-class assignments. The child is often distracted by other events. However, they may attend at length to some irrelevant stimuli - so the problem is more than just a short attention span; it often seems to be a problem of allocating the right amount of time and focus to the appropriate information. It is evident in the result and is supported by previous research literature that mentally retarded hyperactive children tend to show more emotional problems. Based on research conducted by Dekker, Koot, Van der Ende and Verhulst (2002) there were prominent problems in the behaviors of children who were educable, including problems related to social domain; problems with their attention; and their behavior was aggressive. Similarly children with mental retardation who were trained had greater risk problems related to social domains; withdrawals and problems in their thoughts than those children who were without mental retardation. Aggressive behavior is found at 9.8% among people with mental retardation / intellectual disability. Associated factors with this behavior are also ascertained such as with low ability; without chromosomal abnormality (Down Syndrome), presence of Attention Deficit Hyperactivity Disorder, and the identity of the caregiver not being from amongst one's own family members (Cooper, Smiley, Jackson, Finlayson, Allan, Mantry & Morrison, 2009).

This can take various forms such as quick responding with numerous errors, not stopping to think about consequences of their actions, placing themselves in dangerous and risky situations. They usually fail to fully appreciate all the aspects of the instructions given to them and are more likely to respond aggressively (verbally and physically) when frustrated or emotionally hurt by others, they usually do not consider the impact of their actions or statements on others. Such actions can lead others to see such children as immature and to their being shunned by others. The impulsive child will also experience more punishment than normal children and it will enhance his frustration and aggression. Such ideas are also supported by a study conducted by Petty, Bacarese, Hamilton, Davies and Oliver (2014) on the prevalence of some behaviors such as aggression, injuries to the self, and behaviors that are destructive, as 64%, 51% and 51%, respectively. Results indicate that high scores on the measures of overactive and impulsive behavior are the predictors of destructive behavior in children with mental retardation. Most frequently observed behaviors found are psychosis and impulse control disorders in psychiatric hospitals where patients with mental retardation may visit. The most commonly expressed behaviors of patients with mental retardation are aggression, low mood, psychomotor agitation, dysphoria, and irritability (Bobinska, Florkowski, Smigialski & Galecki, 2009b).

10% of mentally retarded children showed indicators of big figure (Item No. 8) whereas mentally retarded hyperactive children did not show this indicator. This reflects poor inner control, and immaturity.

A few the emotional problems are also depicted in the results such as helplessness, shyness, feelings of insecurity, feelings of inadequacy and guilt feelings. Some of these problems can be seen in other studies as well. A qualitative study explored the life experiences of the bereavement of 13 people with mental retardation/intellectual disability. Disenfranchised grief was reflected in their experiences. It is also stated that this kind of grief and bereavement is similar to the grief and bereavement of the general population in need of talking to somebody and finding relief (McRitchie, McKenzie, Quayle, Harlin & Neumann 2013).

Conflicting tendencies, attitudes and emotional disturbances with acute body anxiety are found on some of the items of emotional indicators. Green, Berkovits and Baker (2014) examined such children by administering the Child Behavior Checklist and noticed clinical levels of anxiety and separation anxiety disorder with significantly higher rates among children with mental retardation. Anxiety and co-occurring problems are externalized by this population.

Overall, all the emotional problems discussed above are also problematic for the families and caregivers. Depressive symptoms occur significantly among the caregivers of people with mental retardation having poor quality of sleep (Lin, Hsu, Kuo, Wu, Chu, Lin, 2014). Average score of trait anxiety among siblings of children with mental retardation; and due to the disability of sibling they also suffer from other difficulties is also explored in a study conducted by Saban and Arikian (2013). Mental retardation in children results in social and financial constraints on the supporting families and caretakers. Overall it is believed that there is a relationship between poverty and mental retardation and that it plays a role in experiencing social and health inequalities by the families of children with mental retardation and their families (Emerson, 2007).

Similarly if these problems cannot be managed and handled on time, a day comes when these lead to other kind of problems. This factor is supported by other contributors in the field of research. Fair and not good health is reported by people with mental retardation as compared to their peers. They also face disadvantages in socioeconomic areas on a greater level and go through violence and discrimination (Emerson, Roberston, Baines & Hatton, 2014). People with intellectual disabilities have increased chances of chronic conditions that are similar to those with lifelong disabilities and these chronic conditions reported by Dixon, Ibarra, and Horner- Johnson (2014) are coronary heart disease, obesity and diabetes.

It has been proposed on a higher level that we can help such populations with the provision of services and implementing different effective strategies. It is important in mental retardation and challenging behaviors to consider factors related to social, biological, psychological and environmental areas for assessments

and interventions. A multidisciplinary approach remains the best, which may consist of psychological interventions and the assessment by the psychiatrist (Sinai, Tenanbaum, Aspler, Lotan, Morad & Merrick, 2013). Lloyd and Kennedy (2014) concluded approaches based on function; a variety of operant functions of challenging behaviors, and treatments based on the concept of reinforcement that are widely used developed because of challenging behaviors in people with mental retardation. If these will not be implemented then it will affect the life quality and related outcomes. McGilliuray and Kershaw (2013) found symptoms of depression and associated risk factors in mild mental retardation. Cognitive behavioral therapy and behavioral techniques are considered to be most effective in reducing these symptoms.

Conclusion

This research concludes that mentally retarded children with hyperactivity have problems related to adaptive functioning, social problems or behavioral problems. Along with these emotional problems are common among this population as compared to mentally retarded children without hyperactivity. These emotional problems are aggression, impulsivity, withdrawal, insecurity, hopelessness, immaturity, instability, guilt feelings, shyness and conflicting tendencies. Emotional problems are not only limited to the ones depicted in the study; there could be other kind of problems as well. Similarly hyperactivity is not the only cause of emotional problems in children with mental retardation; other factors are also there.

Implications

This study has a significant contribution for children with mental retardation and associated problems, care givers, teachers, remedial schools, and other kinds of programs designed for the training. Intervention and management of mental retardation and related problems gets difficult when it is encompassed with emotional problems. Therefore assessing emotional problems can help a specialist in the development of programs that helps to minimize them. These can be addressed during training educable children with mental retardation, and management programs

should be valued in emotional factors in assessment and child management practices. This can help children with mental retardation to lead an emotionally sound life without social deprivation, withdrawal, aggression, and impulsivity. This can also overcome hopelessness, guilt, self-injury and suicide; and at last they can live semi-independently in adulthood. As it has been stated earlier in the literature review that caregivers experience high stress and psychological disturbance; this can also be managed in this manner.

Limitations and Future Recommendations

The present study has some limitations. Sometimes it gets difficult for the children with hyperactivity to write and draw figures based on the level or severity of mental retardation. The same issue was experienced while conducting this study. Only Human Figure Drawing is not as sufficient in depicting all kinds of emotional problems. Hyperactivity cannot be the only related issue; therefore we need to investigate other factors. As this study was conducted on a small section of the population, it lacks generalization.

References

- American Association on Mental Retardation. (2002). *Mental retardation definition, classification, and system of supports* (10th ed.). Washington, DC: American Association on Mental Retardation.
- American Psychiatric Association. (1995). American psychiatric association committee on psychiatric services for persons with mental retardation and developmental disabilities. *Psychiatry and Mental Retardation: A Curriculum Guide*. Washington, DC: American Psychiatric Association.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed- Text Rev.). Washington, DC: American Psychiatric Association.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Association.
- Bannikova, P., & Sebirzianov, D. (2013). Mental capacity and the incidence of children with mental retardation in preschool

- education institutions of compensating type. *Gigiena Sanitariia*, 66-70. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/24340585>
- Bobinska, K., Florkowski, A., Amigielski, J., & Gatecki, P. (2009a). Suicidal behaviors in mentally retarded patients. *PolskiMerkuriuszLekarski*, 27(159), 216-20.
- Bobinska, K., Florkowski, A., Smigielski, J., & Gatecki, P. (2009b). Psychiatric diagnostic problems of mentally retarded patients. *PolskiMerkuriuszLekarski*, 27(160), 318-25.
- Cates, J. A. (1991). Comparison of human figure drawings by hearing and hearing-impaired children. *Volta-Review*, 93(1), 31-39.
- Cooper, S. A., Smiley, E., Jackson, A., Finlayson, J., Allan, L., Mantry, D., & Morrison, J. (2009). Adults with intellectual disabilities: prevalence, incidence and remission of aggressive behavior and related factors. *Journal of Intellectual Disability Research*, 53(3), 217-32. doi: 10.1111/j.1365-2788.2008.01127.x
- Cronbach, I. J. (1951). Coefficient alpha and the internal structure of tests. *Psycho Metrika*, 16, 297-334.
- Dekker, M. C., Koot, H. M., Van der Ende, J., & Verhulst, F. C. (2002). Emotional and behavioral problems in children and adolescents with and without intellectual disability. *Journal of Child Psychology and Psychiatry*, 43(8), 1087-1098. doi: 10.1111/1469-7610.00235
- DiLeo, J. H. (1973). Children's drawings as diagnostic aids. New York: Brunner/Mazel, Inc. In M. Catte. (1998). *Emotional indicators in children's human figure drawings: An evaluation of the draw-a-person test*(Unpublished doctoral dissertation). Department of Psychology, University of York.
- Dixon-Ibarra, A., & Horner-Johnson, W. (2014, January). Disability status as an antecedent to chronic conditions: National health interview survey, 2006-2012. *Preventing Chronic Disease*, 30(11), 130251. doi: 10.5888/pcd11.130251
- Durkin, M. S., Hasan, Z. M., & Hasan, K. Z. (1998). Prevalence and correlates of mental retardation among children in

- Karachi, Pakistan. *American Journal of Epidemiology*, 147(3), 281- 8.
- Emerson, E. (2003). Prevalence of psychiatric disorders in children and adolescents with and without intellectual disability. *Journal of Intellectual Disability Research*, 47, 51–58. doi: 10.1046/j.1365-2788.2003.00464.x
- Emerson, E. (2007). Poverty and people with intellectual disabilities. *Mental Retardation and Developmental Disabilities Research Reviews*, 13, 107–113. doi: 10.1002/mrdd.20144
- Emerson, E., Robertson, J., Baines, S., & Hatton, C. (2014). The self-rated health of British adults with intellectual disability. *Research Development Disability*, 35(3), 591-6. doi: 10.1016/j.ridd.2014.01.005
- Gilliam, E. J. (1995). *Attention deficit hyperactivity test: A method for identifying individuals with attention deficit disorder*. US: Pro.ed: An International Publisher.
- Goodenough, F. L. (1926). Measurement of intelligence by drawings. Chicago: World Book Company. In M. Catte. (1998). *Emotional indicators in children's human figure drawings: An evaluation of the draw a person test* (Unpublished doctoral dissertation). Department of Psychology, University of York.
- Green, S. A., Berkovits, L. D., & Baker, B. L. (2014). Symptoms and development of anxiety in children with or without intellectual disability. *Journal of Clinical Child and Adolescence Psychology*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/24528099>
- Hammer, E. F. (1958). The clinical application of projective drawings. Springfield, IL: Charles C Thomas. In M. Catte (1998). *Emotional indicators in children's human figure drawings: An evaluation of the draw a person test* (Unpublished doctoral dissertation). Department of Psychology, University of York.
- Hauser, M. J. (1997). The role of the psychiatrist in mental retardation. *Psychiatric Annals*, 27, 170-174.
- Hibbard, R. A. & Hartman, G. L. (1990). Emotional indicators in human figure drawings of sexually victimized and non-

- abused children. *Journal of Clinical Psychology*, 46(2), 211 - 219.
- Kerker, B. D., Owens, P. L., Zigler, E., & Horwitz, S. M. (2004). Mental health disorders among individuals with mental retardation: Challenges to accurate prevalence estimates. *Public Health Reports*, 119, 409-417.
- Kishore, M. T., Nizamie, A., Nizamie, S. H., & Jahan, M. (2004). Psychiatric diagnosis in persons with intellectual disability in India. *Journal of Intellectual Disability Research*, 48(1), 19-24.
- Koppitz, E.M. (1968). Psychological evaluation of children's human figure drawings. New York: Psychological Corp.; Orlando, Fl.: Harcourt Brace Jovanovich. In Leung yim Ting, Jinny (2008). *An investigation of Human Drawings and the use of colors in psychological evaluation of children with emotional and behavioral disorders*. (Unpublished bachelors of social sciences thesis in Psychology). Department of Applied Social Studies.
- Koppitz, E. M. (1969). *Psychological evaluation of children's human figure drawings*. York Town Heights, H.V: Board of Cooperative Educational Services.
- Koskentausta, T., Iivanainen, M., & Almqvist, F. (2007). Risk factors for psychiatric disturbance in children with intellectual disability. *Journal of Intellectual Disability Research*, 51(Pt 1), 43-53.
- Lin, L. P., Hsu, S. W., Kuo, M. T., Wu, J. L., Chu, C., & Lin, J. D. (2014). Onset aging conditions of adults with an intellectual disability associated with primary caregiver depression. *Research in Developmental Disabilities*, 35(3), 632-8. doi: 10.1016/j.ridd.2013.12.013
- Lipman, R. S. (1986). Overview of research in psychopharmacological treatment of the mentally ill/mentally retarded. *Psychopharmacol Bull*, 22, 1046-1054.
- Lloyd, B. P., & Kennedy, C. H. (2014). Assessment and treatment of challenging behavior for individuals with intellectual disability: A research review. *Journal of Applied Research in Intellectual Disabilities*, 27(3), 187-199. doi: 10.1111/jar.12089

- Malchiodi, C. A. (1998). Understanding children's drawings. London: Jessica Kingsley Publishers. In Leung yim Ting, Jinny (2008). *An investigation of human drawings and the use of colors in psychological evaluation of children with emotional and behavioral disorders* (Unpublished bachelors of social sciences thesis in Psychology). Department of Applied Social Studies.
- McGillivray, J. A., & Kershaw, M. (2013). Do we need both cognitive and behavioral components in interventions for depressed mood in people with mild intellectual disability? *Journal of Intellectual Disability Research*. doi: 10.1111/jir.12110. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/24372867>
- McRitchie, R., McKenzie, K., Quayle, E., Harlin, M., & Neumann, K. (2013). How adults with an intellectual disability experience bereavement and grief: A qualitative exploration. *Death Studies*, 38(3), 179-85. doi: 10.1080/07481187.2012.738772
- Mental retardation (causes) (2010, June 15). *Psychology Today*. Retrieved from <http://www.psychologytoday.com/conditions/mental-retardation?tab=causes>
- Patty, J. L., Bacarese-Hamilton, M., Davies, L. E., & Oliver, C. (2014). Correlates of self-injurious, aggressive and destructive behavior in children under five who are at risks of developmental delay. *Res Dev Disabil*, 35(1), 36-45. doi: 10.1016/j.ridd.2013.10.019.Epub2013Nov12
- Persons with Disabilities (PWDS) Statistics in Pakistan (2012, November). A resource book on population of PWDs: Province, district, gender, area, and disability wise statistics. *Research and Development Department of HHRD*, Islamabad, Pakistan.
- Pratt, H. D., & Greydanus, D. E. (2007). Intellectual disability (mental retardation) in children and adolescents. *Prim Care*, 34(2), 375-86. Retrieved from <http://www.pipatl.org/bibliography/hauser/assessment.html>
- Saban, F., & Arıkan, D. (2013). The self-esteem and anxiety of children with and without mentally retarded siblings. *Journal of Research in Medical Sciences*, 18(11), 961-9.

- Sappok, T., Diefenbacher, A., Bergmann, T., Zepperitz, S., & Dosen, A. (2012). Emotional developmental disorders in individuals with intellectual disabilities (ID): A case-control-study. *Psychiatrische Praxis*, *39*(5), 228-38. doi: 10.1055/s-0032-1305078
- Shea, S. E. (2006). Mental retardation in children ages 6 to 16. *Semin Pediatric Neurology*, *13*, 262-270.
- Silka, R. V., & Hauser, J. M. (1997). Psychiatric assessment of the person with mental retardation. *Psychiatric Annals*, *27*(3), 162-169.
- Sinai, A., Tenenbaum, A., Aspler, S., Lotan, M., Morad, M., & Merrick, J. (2013). Challenging behavior and related factors in people with intellectual disability living in residential care centers in Israel. *Front Public Health*, *1*, 13. doi: 10.3389/fpubh.2013.00013
- Stromme, P., & Diseth, T. H. (2000). Prevalence of psychiatric diagnoses in children with mental retardation: data from a population-based study. *Developmental Medicine & Child Neurology*, *42*, 266-270. doi: 10.1111/j.1469-8749.2000.tb00083
- Su, C. Y., Lin, Y. H., Wu, Y. Y., & Chen, C. C. (2008). The role of cognition and adaptive behavior in employment of people with mental retardation. *Research in Developmental Disabilities*, *29*(1), 83-95.
- Szymanski, L., Madow, L., & Mallory, G. (1990). *Psychiatric services to adult mentally retarded and developmentally disabled persons* (Report of APA Task Force #30). Washington, DC: American Psychiatric Association.
- World Health Organization (WHO) (2007). Atlas: Global resources for persons with intellectual disabilities, Geneva.