



## THE EFFECT OF PLAY THERAPY ON IRRITABILITY AMONG INTELLECTUALLY DISABLED CHILDREN

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### Abstract

The Effect of Play therapy was aimed to facilitate intellectually disabled children diagnosed with Irritability. The present study consisted of three phases, such as Phase 1, 2 and 3. The Phase 1 involved a survey method which was exploratory in nature to examine the prevalence of, Irritability among intellectually disabled children. The total sample for the current study consisted of 283 intellectually disabled children randomly selected from rural, semi urban and urban areas of Visakhapatnam, Vizayanagarm and Srikakulam districts of Andhra Pradesh. ABC - C Check list was developed and standardized by Aman and translated in Telugu by Raju M.V, Lehotkay R, and Saraswathi Devi T, for this study and a demographic data was also used. This was followed by the development of an intervention program (as Phase - 2) to be administered. Phase 3 which was also one group pre-test, post -test design with 28 sample focused upon the testing of the effectiveness of the developed psychological intervention. Statistical tests used for the present study included percentages, Mean, standard deviation-test, one-way ANOVA, Post Hoc Test and Paired Sample t-test. The results observed a significant difference between pre-test and post-test measures of Irritability on the application of Play therapy as an intervention for intellectually disabled children.

**Key words:** Play Therapy, Irritability, Intellectually Disabled Children

### Introduction

Children with intellectual disability and irritability have difficulty maintaining relationships with others, have reduced access to learning and leisure environments, and have difficulty functioning in an adaptive manner (Murphey et al., 2005). Because of the social significance of the effects of exhibiting irritability, children with intellectual disabilities are in need of treatments that address not only externalized behavior, but also their emotional development and well-being (Seltzer & Krauss, 2001). Behavior Problems among children with an intellectual disability is characterized by rigid, aggressive, destructive, withdrawing, and self-injurious behavior (Emerson, Moss, Kiernan, 1999; Hove & Havik, 2008; Myrbakk & Tetzchner, 2007).

Irritability is a behavior or response to people or circumstances that cause annoyance or frustration. While it can be a normal temporary symptom of situational stress or anxiety, severe or persistent, irritability may be an indication of a more complex underlying disorder. Irritability may accompany other symptoms that vary depending on the underlying disease, disorder or condition. Symptoms that frequently affect behaviors may also involve other body systems.

Irritability can be classified as a mood state, clinical symptom, or temperamental trait. Irritability is variably defined and measured in terms of anger, response to frustration, and reactive aggression. One formulation suggests that irritability is a trait presentation of chronic anger, and that irritability is characterized by a decreased threshold for, and aberrant responses to frustration, where frustration is the emotional response to blocked goal attainment. In addition, irritability can also be conceptualized in terms of aberrant approach responses to threat; by definition, then, reactive aggression is characteristic of irritable people.

Any self-inflicted repetitive action that leads to lacerations, bruising, or abrasions of the person's own body. Examples include head banging, eye- gouging, biting, scratching, self-pinching and punching, rectal digging and hair-pulling. Examples include pushing, shoving, hitting, throwing objects or screaming at others, bullying others (physically or verbally), biting, and scratching. They are screams for no apparent reason, may be attention seeking. Usually they show no



sign of being upset, Does not include screaming when pain is experienced (e.g., injections). They are screaming, crying in anger, striking out and stamping feet, grizzly or whiny.

They have sudden mood swings, may laugh, cry or scream for no obvious reason. The children cry or scream when circumstances do not warrant this. They do not include crying or screaming when pain is experienced). They are highly “emotional.” They enjoy making noises or annoying staff, acting out, expresses frustration, temper tantrums,

They include self-injurious behaviors. excessive masturbation, and self- mutilation. Need not necessarily result in bleeding lacerations or cuts. Any physical form of self-injury. Screams, Stamps feet, gets aggressive if subjects requests or wishes or not met.

### Rationale of the study

The use of play therapy to treat children with an intellectual disability and irritability may bridge the gap between the needs of special children and the available basket of integrated services. These existing gaps warrant new research into the efficacy of play therapy as an intervention for reducing irritability exhibited by children with an intellectual disability. The proposed Study attempts the usefulness of play therapy as an intervention in reducing irritability for individuals with an intellectual disability. Those who use play therapy will be able to add a new instrument in the form of computer games that will expand the therapist’s abilities and avenues in working with children.

It has variously been shown in a number of studies that, persons with disabilities who’ participate in games improve in strength, coordination, and flexibility. Both parents and teachers have always conceded that individuals with disabilities who participate in physical play activities are less irritability, perform better academically, are more stable in behavior as well as in their overall social interactions. Hence, the study underlines play therapy as an intervention program for reducing irritability in children with mild intellectual disability. Therefore, the study has been taken up.

### Objectives

1. To explore the irritability among moderate intellectually disabled children.
2. To find out the significant difference between demographical variables (a) Gender and (b) Age on irritability among moderate intellectually disabled children.
3. To provide play therapy as an intervention for minimizing irritability among mild intellectually disabled children.
4. To find out the effectiveness of play therapy.

### Hypotheses

Hypothesis-1. There would be significant level of irritability among mild intellectually disabled children,

Hypothesis-2 (a). There would be a significant difference in the irritability of the mild intellectually disabled children based on the Gender

Hypothesis-2 (b). There would be a significant difference in irritability of the mild intellectually disabled children based on age.

Hypothesis-3. Play therapy would be an effective intervention in minimizing behavioral problems among mild intellectually disabled children. :

### Design of the study

The present study is a pre -test post- test design. The study consisted of experimental group taking play therapy as intervention.



## Participants

The participants for the present study included children diagnosed with mild intellectual disability as per the diagnostic criteria of DSM-IV TR. These children attend special schools across north coastal districts of Andhra Pradesh. The age ranged from 6-15 years, boys included 175 and girls included 108. The total sample consisted of 283 mild intellectually disabled children, out of whom 30 participants were randomly assigned for play therapy intervention, during the process of intervention, 2 participants' were subsequent dropouts. Hence, a total of 28 participants received complete play therapy intervention.

## Inclusion Criteria

- The children diagnosed with moderate intellectual disability having irritability are included.
- Children below 15 years of age are included.

## Exclusion Criteria

- Normal children having irritability are excluded.
- Moderate, severe and profound intellectually disabled children are excluded in the study.
- Mild intellectually disabled children above 16 years are excluded.

## Tools

The Aberrant behavior checklist and demographic variables was utilized for the present study.

## Aberrant behavior checklist

The Aberrant behavior checklist was developed by Aman, MG. Singh, N.N, Stewart, A.W., and Field C.J. (1985a). Researcher used a Telugu translation of the ABC. Translation was developed by Lehotkay R, Saraswathi Devi T, Raju M.V, Bada PK, NutiS, Kempf N, Carminati G G. The checklist can be responded to by selecting any of the four options. 0 indicates not at all a problem, 1. indicates the behavior is a problem but slight in degree, 2. indicates the problem is moderately serious, 3 indicates the problem is severe in degree.

## Demographical variables

The demographical variables included in the present study are Gender and age.

- Gender: Gender consists of boys and girls.
- Age: Age of the participants.

## Procedure

The present study consisted of three phases.

In Phase I, an official permission is procured from the parents and teacher through informed consent form. The parents were informed and explained about the purpose of the study. They were also informed that the responses will be kept highly confidential and used for research purposes only. The Aberrant Behavior Checklist instrument was provided to the parents/teachers. Where ever doubts were raised, the researcher explained to the parents of moderate intellectually disabled children. The Aberrant Behavior Checklist (ABC) in Telugu version was completed mostly by the mothers, In Phase II, the



checklists filled by the respective parents/teachers are collected and scoring procedure is done. From the participants, children “having irritability are selected for play therapy intervention. In Phase III, play therapy was administered on the experimental group. Play Therapy intervention was conducted by using computer assisted video games and physical games. Computer assisted video games involve animated car racing, crazy birds, super cow, super bikes, police super cars, learning alphabets with feedback of appraisals, simple pleasurable games down loaded from Internet and Physical games such as indoor and outdoor games such as throw ball, running race, mass drill, musical chairs and beading, play with toys like zoo animals, farm animals, truck, airplane, car, boat, doll family and furniture, large and small balls and hand puppets.

The play therapy intervention was conducted for 2 sessions in a day, morning and evening session, each session of play therapy was carried out for a period of 45 minutes in the morning and 45 minutes in the evening session. Computer assisted video games were conducted in the morning session and physical games were conducted in the evening session. The sessions were carried out with experts in the field of computers assisted video games and physical games. A total of 44 sessions were conducted. Efficacy of the play therapy intervention was tested on the experimental group. Interviews and counseling sessions were conducted to the parents of intellectually disabled children. After the conduction of the play therapy intervention of 44 sessions, Post test was conducted on the experimental group by using the Aberrant behavior checklist.

In Phase III, testing of the effectiveness of the developed psychological intervention was done on the experimental group. Soon after the completion of psychological intervention of nine weeks duration Post-test on irritability among intellectually disabled children.

## Statistical analysis

After scoring, the collected responses were tabulated, analyzed and interpreted using SPSS by mean of percentages, Mean, Standard Deviation. t- test, and Paired sample t-test.

### 1. The exploration of Irritability in mild children with intellectual disability.

**Table – 1**

**Irritability in mild children with intellectual disability.**

Problem	Normal		Moderate		Moderately Severe		Severe	
	Numb er	Percenta ge	Numb er	Percenta ge	Numb er	Percenta ge	Numb er	Percenta ge
Irritabili ty	149	52.7	115	40.6	17	6	2	0.7

The results of the study presented in Table – 1 showed that irritability problems, the percentage of children facing this problem were found to be 0.7 at severe level. In the moderately severe level the percentage of children with intellectual disability facing irritability problems was 6. The percentage of children with irritability is 40.6 found in moderate level. The percentage of children with irritability problem was 52.7 in the normal level. Irritability problems are more in mild children with intellectual disability at severe level.

**Hypothesis-1** stating the there would be significant level of irritability among mild children with intellectual disability is accepted.

### 2. Demographical variables and irritability among mild children with intellectual disability.

Irritability is common in children with intellectual disability. Psychiatric and behavior disturbances as 3-4 times commoner in children with intellectual disability that in general population. Irritability arises from conditions within the child or from external influences, effects of which are often not noticed or understood by others. In this study the following tables explains that the influence of demographical variables on irritability among children with intellectual disability.

**Table – 2**  
**Frequency distribution of diagnosis of irritability on the basis of Gender.**

Problem	Category	Gender				Total	
		Boys		Girls			
		No.	Percentage	No.	Percentage	No.	Percentage
Irritability	Normal	86	49.1	63	58.3	149	52.7
	Moderate	73	41.7	42	38.9	115	40.6
	Moderately Severe	14	8	3	2.8	17	6
	Severe	2	1.1	0	0	2	0.7
	Total	175	100	108	100	283	100

Table – 2 shows the presence or prevalence of irritability among intellectually disabled boys and girls. Intellectually disabled boys have severe irritability (1.1%), than intellectually disabled girls. Irritability was prevalent in 8 percent respectively of intellectually disabled boys and 2.8 percent girls at moderately severe level. In intellectually disabled boys at moderate level, irritability 41.7 percent among boys and 38.9 percent among girls. 58.3 percent girls and 49.1 percent at normal level.

**Table – 3**  
**Results on mean different between gender groups with irritability**

Problems	Gender	N	Mean	Std. Dev.	t-value
Irritability	Boy	175	16.92	9.22	2.41*
	Girl	108	14.26	8.69	

\*p<0.05 Significant level

Table-3 shows that with regard to the mean scores of the children with irritability. In irritability, the mean score (M=16.92) of boys is higher that the mean score (M=14.26) of girls and the t-value is 2.4 1, There is a significant difference between intellectually disabled boys and girls.

Therefore, Hypothesis -2 (a) stating that there would be a significant difference in the irritability of the mild children with intellectual disability based on the Genderis accepted.

**Table – 4**  
**Frequency distribution of diagnosis of irritability on the basis of Age.**

Problem	Category	Age				Total	
		6 to 10		11 to 15			
		No.	Percentage	No.	Percentage	No.	Percentage
Irritability	Normal	75	45.2	74	63.3	149	52.7
	Moderate	77	46.4	38	32.5	115	40.6
	Moderately Severe	12	7.2	5	4.3	17	6.0
	Severe	2	1.2		0.0	2	0.7
	Total	166	100	177	100	283	100

Table-4 shows that 6 to 10 age group children with intellectual disability have more irritability problems than 11 to 15 age group children in severe level. In moderately severe level, 6 to 10 age group children have more problems than 11 to 15 age group children. 46.4 percentage of 6 to 10 years, and 32.5 percent 11 to 15 age group intellectual disabled





children have irritability in moderate level. 45.2 percent of 6 to 10 years and 63.3 percent of 11 to 15 age group intellectual disabled children have irritability in normal level.

**Table – 5**  
**Results on mean difference of Age in Children with intellectual disability with respect to their irritability.**

Problems	Gender	N	Mean	Std. Dev.	t-value
Irritability	6 to 10	166	16.39	9.42	2.44*
	11 to 15	117	13.74	8.35	

\*p<0.05 Significant level

Table-5 reveals that, the mean scores of the children with irritability in behavioral problem. For children with behavioral problems predominantly in irritability, the mean score (M=16.39) of 6 to 10 years children is higher than the mean score (M=13.74) of 11 to 15 years children and the t-value is 2.44. There is a significance between 6 to 10 years children and 11 to 15 years children.

Therefore, **Hypothesis-2 (b)** stating that there would be a significant difference in the irritability of the mild children with intellectual disability based on **age** is accepted.

### The effect of play therapy

Play a vital role in enhancing the effectiveness of play therapy as an intervention for a wide range of children's emotional, social, and behavioral difficulties. Play therapy helps to treat children with an intellectual disability and mental health disorder may bridge the gap between the mental health needs of exceptional children and the available services. Initial assessment showed that scores of irritability in experimental group were high. But after intervention with play therapy program (computer games and physical games) the scores showed a marked reduction in experimental group. The reduction in scores of irritability in the finding that there was a marked effect for specific intervention (18+18 morning and evening) in reducing irritability. The following tables shows that the use of play therapy as an intervention for reducing irritability.

**Table- 6**  
**Results on Mean difference between Pre-test and Post-test on Irritability**

Irritability	Pre-test	Post-test	t-value
Number of subject	28	28	2.12*
Mean	14.82	11.43	
Std. Deviation	6.68	5.24	

\*P< 0.05 significant level

Table-6 shows that with regard to irritability, the mean score of mild children with intellectual disability at pre intervention level (M=14.82) and Mean score at post intervention level is (M=11.43) and the t-value is (2.12), 'which is significant. Considering the irritability behavioral problem, children with intellectual disability showed changes only 18 sessions of play therapy Proving into the effect of play therapy among mild children with intellectual disability the difference in the mean score values between pre-test and post-test was highly significant only after 18 sessions of play therapy.

Therefore, **Hypothesis -3** stating that Play therapy would be an effective intervention in minimizing irritability among mild children with intellectual disability. There would be a significant difference between Pre-test and post test scores among the children with intellectual disability respondents with regard to irritability. **Hypothesis -3 is accepted.**



Cover Page



## Discussion

Irritability is commonly severe problem. The finding in this study that irritability is the most commonly seen behavioral problem is supported by Hope et al. (1997a) who put aggressive behavior as one among the three most common problems. In many other studies irritability is included with aggression which was very commonly found, as reported in studies by Cohen — Mansfield and Billing (1996) and McMinn and Draper (2005).

The findings of our study indicate higher incidence of disordered behavioral amongst boys. This finding has been supported by some other studies as well (Dagara & Singh, 1981; Lapouse & Monk, 1964; Werry & Quay, 1977). However, a question arises why irritability is more commonly seen in boys. It may be because boys are by nature more aggressive and are known to be more vulnerable to the ill effects of the environment. There could be biological or social influences including family influences on child's behavior itself that influence his interactions with others.

6-10 age group children are found to have more irritability than 11 to 15 year intellectually disabled children. Intellectually disabled 6 to 10 age group children experienced a greater degree of irritability than 11 to 15 age group children in moderately severe ranges.

Age wise analysis of mentally retarded population revealed higher prevalence of irritability in lower age group in comparison to higher age group. Similar findings were documented by the past studies carried out which emphasized that irritability problems had been identified as a significant issue among children and adolescents with intellectual disability (Einfeld & Tonge, 1996; Dykens 2000; Einfeld, et al. 2006; Wallander, Dekker & Koot, 2006; Hysing, Elgen, Gillberg, Lie & Lundervold, 2007; Elhamid, Howe & Reading, 2009).

The findings of this study are consistent with other experiential studies that demonstrated the effectiveness of play therapy as an intervention for reducing children's behavioral problems like irritability (Eagerly, 2004; Fall et al., 2002; Packman & Bratton, 2003; Ramane & Kapur, 1999).

## Findings of the study

1. Irritability problems are more in mild children with intellectual disability at severe level.
2. (a) Mild Intellectually disabled boys have severe irritability than mild intellectually disabled girls.  
(b) 6 to 10 age group intellectually disabled children have more irritability than 11 to 15 age group children in severe level.
3. The results on the paired-independent sample t-test showed a highly significant mean difference between the Pre-test and the Post-test scores in irritability of intellectually disabled children.

## Conclusion

Consequences for children identified with an intellectual disability and irritability include decreased quality of life, strained relationships, and substandard care (Dekker et al., 2002; Einfeld & Tonge, 1996; Matson et al., 2009; Murphey et al., 2005). A dearth of outcome research in the treatment of children with disabilities warranted new research and formed the basis of this study. The present study is an attempt to facilitate intellectually disabled children diagnosed with Irritability with suitable intervention program. The findings revealed that Psychological interventions such as computer assisted games as play therapy, exclusively outdoor games and indoor games were applied to reducing irritability. There is an urgent need for establishing school-based mental health program and appropriate screening measure in this environment. There would afford early identification of intellectually disabled children with irritability and appropriate referral for clinical evaluation and interventions. The need to focus policy making attention on hidden burden of irritability on intellectual disabled children in north costal Andhra Pradesh is essential.



Cover Page



## Recommendations for Future Research

1. Studies should further examine whether play therapy is an effective approach for individuals with severe intellectual disabilities.
2. Conduct studies that examine the effectiveness of group play therapy with children with intellectual disabilities and social problems.
3. Conduct computer games based teacher training studies with special education teachers.

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