

## **Play Therapy: A Creative Approach of Behavioural Therapy Among Intellectual Disability**

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### **ABSTRACT**

The Role of Play therapy was aimed to facilitate intellectually disabled children diagnosed with Behaviour problems. The sample for the current study consisted of 28 intellectually disabled children with high behavioural problems, selected from Vizianagaram district of Andhra Pradesh. Behavioural problems among intellectually disabled children were diagnosed by ABC–C Check–list, developed and standardised by Aman and translated in Telugu by MVR.Raju, Lehotkay R, Saraswathi Devi T, and Giuliana Galli Carminati (2014) for this study. Play therapy intervention was conducted by using computer assisted video games, indoor and outdoor games and sports. Pre-test and post -test design with 28 sample focused upon the testing of the effectiveness of the developed psychological intervention. The results observed a significant difference between pre-test and post-test measures of Behaviour problems predominantly irritability, Irritability. Lethargy, Stereotype and Hyperactivity on the application of Play therapy as an intervention for intellectually disabled children.

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## **Introduction**

Children with intellectual disability and behavioral problems 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 problem behaviors, 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, stereotypic, aggressive, destructive, withdrawing, and self-injurious behavior (Emerson, Moss, Kiernan, 1999; Hove & Havik, 2008; Myrbakk & Tetzchner, 2007). Emerson et al. further conceptualized problem behavior as external functioning "of such intensity, frequency, or duration that the physical safety of the person or others is placed in serious jeopardy, or behavior which seriously limits the person's access to ordinary settings, activities, services, and experiences".

## **Characteristics and types of Behaviour Problems**

Children with mental handicap show behaviours that are considered as problematic because of the harm or inconvenience caused to others or to the child. The presence of the behavioural problems in children gives strain to teachers, parents and others concerned. Besides, they may interfere with activities in the home and classroom settings. These behavioural problems could be due to a number of reasons like, deficits in adaptive behavior skills, cognitive skills or problem-solving skills etc. about sixty percent of the intellectually disabled are reported to have problem behaviors. However, one has to bear in mind that, children with normal intelligence also show problem behaviors. In fact, to some extent, exhibition of problem behavior is a normal development phenomenon. Generally, with the advancement of age, children with normal intelligence learn to behave appropriately in the given situations. This may not be achieved by the children with low intelligence. Hence, it is necessary to draw some guidance to call a behavior as problem behavior.

- a) Behavior which is harmful to oneself.
- b) Behavior which is harmful to others.
- c) Behavior which interferes with the learning tasks.
- d) Behavior which is not socially acceptable.
- e) Behavior which is age-inappropriate.

The above characteristics may be observed in everybody. Rare occurrence of these behaviours cannot be qualified as problem behaviours.

For the convenience and easy understanding, the various problem behaviors which are commonly observed in persons with intellectual disability can be broadly classified into the following as per the classification given in ABC

**Behavior Problems** are divided into five types.

1. Irritability.
2. Lethargy
3. Stereotype
4. Hyperactivity
5. Inappropriate speech:

### **Play Therapy**

Play is very important in the life of the child because children become familiar with the world around them through experiential means instead of cognitive means. Play therapy is used with children in psychotherapy to assist them in the articulation of feelings and thoughts. Such articulation is difficult due to the child's lack of abstract reasoning and verbal skills (Hall, Kaduson & Schaefer, 2002). Play is the conduit through which children's express thoughts, feelings, and emotions. Play can be a vehicle for the child to practice social skills, learn new cognitive patterns, and make moral judgments (Norton & Norton, 1997).

Studies on play therapy reveal ample evidence that play therapy is an effective treatment for a variety of social-emotional disorders (Bratton & Ray, 2000; Warren & Balkin, 2005). The past two decades well-designed, controlled play intervention studies have emerged. Meta-analytic reviews of play therapy and play counseling research (Bratton & Ray; Bratton et al; Ray et al, 2005, Ray et al, 2001) have focused on the efficacy of play therapies and the combined effects of play therapies with children and families.

Play therapy is a newly emerging method that modern psychologists and counselors are beginning to accept. Play therapy is essentially utilized to help a child overcome an obstacle or tragedy in his or her life, and to gain a clearer understanding of a child's thought processes and memories that he or she may not be able to express verbally.

Play therapy is effective in addressing a wide variety of social, emotional, behavioural and learning problems, including posttraumatic stress disorder, conduct disorder, aggression, anxiety/fearfulness, depression, ADHD, impulsivity, low self-esteem, reading difficulties and social withdrawal. Play therapy

has been well documented to be an effective treatment for children suffering from Behaviour problems. Intellectual disabled Children with Behaviour problems represent a large portion of children requiring psychological treatment.

### **Computer assisted video games**

Computer games have become very common toys with which children play. They view them as being fun and inviting (Kokish, 1994). Gaming systems are portable and are easy to set up in any place. Computer games are used in schools, and the psychotherapy centers (Bertolini & Nissim, 2002; Dahlquist, 2006), making them much more than just a toy used for personal enjoyment. Although computer games have been shown to be useful in the psychotherapy setting, missing from the research studies is a demonstration of the therapeutic use of computer games from a play therapy perspective with children. Specifically, the current research does not address how computer games can be used in play therapy with children who are identified as behaviourally disturbed. Computer games are useful as a play therapy tool for treatment with behaviourally disturbed children is demonstrated; the games could be a useful tool for those who work with children using play therapy.

### **Physical Games**

When persons with disabilities participate in physical games and sports, they are adapted to their levels of bodily conditions in order for them to benefit fully and attain total physical fitness, enhancing their cognitive, psychomotor and affective development. In other words, when one develops mental fitness, physical strength, and psychosocial well-being through sports, one is thus adequately prepared for meaningful undertaking in other activities to the best of his/her capacities.

It is widely acknowledged that physical games are essential to children's growth and development. Regular physical activity can have a positive impact on students' physical, mental, and social well-being. In particular, physical games are likely to have an impact on students' achievement, readiness to learn, behaviour, and self-esteem. Positive experiences with physical activity at a young age also help lay the foundation for healthy, productive lives. Research also indicates that children are in danger of developing serious diseases associated with obesity, which can result from a lack of physical games.

Children actively acquire a variety of skills by playing which contributes to their social and psychological development (Mofradzadeh K, 2009, Zangane M, 2009 and Fathi M, 2006).

Research has shown that regular motor activity has many benefits for mental and physical health (Setkowicz Z, Mazur A 2006). Play has been shown to have positive mental and physical benefits for intellectually disabled children (Bonab B.G, Nabavi M, 2003).

## **Rationale of the study**

The use of play therapy to treat children with an intellectual disability and behavioural problems 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 behavioural problems exhibited by children with an intellectual disability.

The proposed study attempts the usefulness of play therapy as an intervention in reducing behavioural problems 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 behavioural problems, 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 behavioural problems in children with intellectual disability. Therefore, the study has been taken up.

## **Methodology**

The purpose of this study was to examine the exploration of behavioural problems among intellectually disabled children, and the effectiveness of computer assisted video games and physical games as a play therapy tool for children suffering from the behavioural problems.

This study will provide evidence as to whether the use of computer assisted video games and physical games are effective tools in the treatment of children suffering from behavioural problems.

## **Objectives**

1. To explore the behavioural problems among intellectually disabled children.
2. To provide play therapy as an intervention for minimizing behavioural problems among intellectually disabled children.
3. To find out the efficacy of play therapy.

## **Hypotheses**

**Hypothesis-1.** *There would be significant level of the behavioural problems among intellectually disabled children.*

**Hypothesis-2.** *Play therapy would be an effective intervention in minimizing behavioural problems among 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 intellectual disability having behavioural problems are included.
- Children below 15 years of age are included.

## **Exclusion Criteria**

- Normal children having behavioural problems 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 behaviour 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, MVR. Raju, Lehotkay R, Saraswathi Devi T, Bada PK, Nuti S, Kempf N, and Giuliana Galli Carminati (2014). The checklist can be responded to by selecting any of the four portions. 0 indicates not at all a problem, 1. indicates the behaviour is a problem but slight in degree, 2. indicates the problem is moderately serious, 3 indicates the problem is severe in degree. The factor validity and reliability of Telugu version of the ABC evidenced factor validity and reliability comparable to the original English version and appears to be useful for assessing behaviour disorders in Indian children with intellectual disabilities.

### **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 Behaviour Checklist instrument was provided to the parents/teachers. Wherever doubts were raised, the researcher explained to the parents of 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 behavioural problems 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, One-way ANOVA, Post Hoc Tests and Paired sample t-test. The purpose of this study was to assess the behavioural problems among intellectually disabled children and to test the effectiveness of play therapy for managing these problems.

### Exploration of behavioural problems among mild intellectually disabled children.

This study tried to explore behavioural problems among intellectually disabled children. All the intellectually disabled children were screened for presence of behavioural problems using the ABC Check list. The ABC Check list scores showed that out of the 283 children screened for behavioural problems 175 boys and 108 girls had one or more behavioural problems. This finding showed that normal to severe behavioural problems occur in large majority of children.

**Table -1**

### The exploration of various behavioural problems in mild intellectually disabled children.

Behavioural problems and sub types	Normal		Moderate		Moderately Severe		Severe	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Behaviour problems,	130	45.9	137	48.4	16	5.7	0	0
Irritability	149	52.7	115	40.6	17	6	2	0.7
Lethargy	143	50.5	129	45.6	11	3.9	0	0
Stereotype	162	57.2	95	33.6	23	8.1	3	1.1
Hyperactivity	108	38.2	146	51.6	27	9.5	2	0.7
Inappropriate speech	142	50.2	107	37.8	33	11.7	1	0.4



The results of the study presented in Table -1 showed that there were no intellectually disabled children facing severe behavioural problems. When the sub groups within the same level were compared it was found that there were intellectually disabled children facing severe stereotype problems and their percentage was about 1.1. In the other sub types; hyperactivity and irritability problems the percentage of children facing this problem were found to be 0.7 each, which were in second place. The children who were not having any lethargy were reported to be zero in the severe level.

In the moderately severe level, the percentage of intellectually disabled children facing behaviour problems was 5.7 only. When the sub groups were compared the intellectually disabled children facing inappropriate speech problems were more in number (33) and their percentage was 11.7 and the children suffering with hyperactivity was found to be 9.5 per cent in the same level.

It was found from the analysis that there was a majority of intellectually disabled children experiencing behavioural problems in moderate level was found to be 137 (48.4%). When the sub groups were observed, it was found that there were 146 children (51.6%) hyperactive in moderate level. The percentage of children with lethargy was 45.6; irritability 40.6 and stereotype 33.6 were found in moderate level. The intellectually disabled children without proper speech were also high, 37.8 per cent.

In the normal level there were 130 (45.9%) intellectually disabled children facing behavioural problems. In the sub groups the stereotype problems were faced by 57.2 per cent of the children. The percentage of children with irritability problem was 52.7 and lethargy problem was found to be 50.5 in the normal level. It was also reported that inappropriate speech problem was faced by 50.2 per cent of children and 38.2 per cent of the children were found to be hyperactivity in the normal level.

Stereotype problems are more in mild intellectually disabled children at severe level. Secondly irritability and hyperactivity were commonly severe problems. In moderately severe level, inappropriate speech problems are higher than other types of behavioural problems. Hyperactivity and Stereotype problems were next common problems in moderately severe problems among mild intellectually disabled children.

**Hypothesis-1** stating that there would be significant level of the behavioural problems among mild intellectually disabled children 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 behavioural

problems experimental group were high. But after intervention with play therapy programme (computer games and physical games) the scores showed a marked reduction in experimental group. The reduction of scores in behavioural problems shows that there was a marked effect for specific intervention (18 +18 morning and evening) in reducing behavioural problem. The following tables shows that the use of play therapy as an intervention for reducing behavioural problems.

**Table-2**

**Results on Mean difference between Pre-test and Post-test measures on Behavioural Problems among Intellectually disabled children.**

Behavioural Problems	Pre – test	Post-test	t-value
Number of subjects	28	28	3.28**
Mean	54.54	39.00	
Std. Deviation	22.30	11.49	

\*\* P< 0.01. Significant level

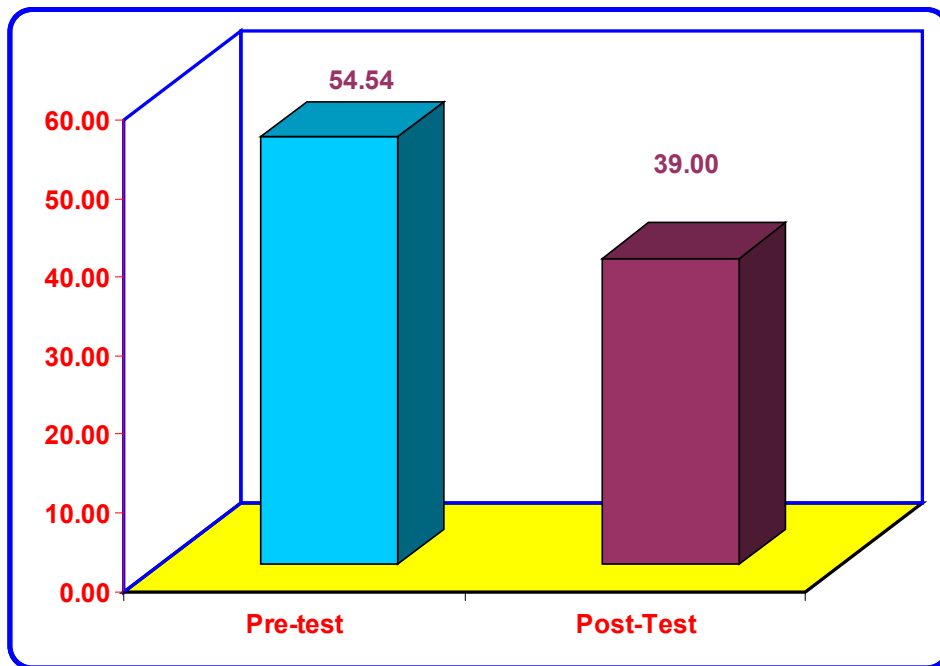


Table-2 shows that Behavioural Problems expressed by the selected intellectually disabled children who underwent play therapy showed a marked improvement in the reduction of their behavioural problems. The mild degree of intellectual disability, the behavioural problems reduced gradually after intervention of play therapy. The mean score of the respondents or intellectually disabled children in Pre-test is (M=54.54) and the Post-test mean score is (M=39.00) and the t-value is (3.28), which is highly significant.

Thus, the above results indicate a significant difference between Pre-test and Post –test scores with regard to intellectually disabled children diagnosed with Behavioural Problems.

The scores were statistically significant difference in behavioural problems between two tests. There was a highly significant reduction in behavioural problems after intervention in experimental group.

**Table-3**

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

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

\* P< 0.05. Significant level

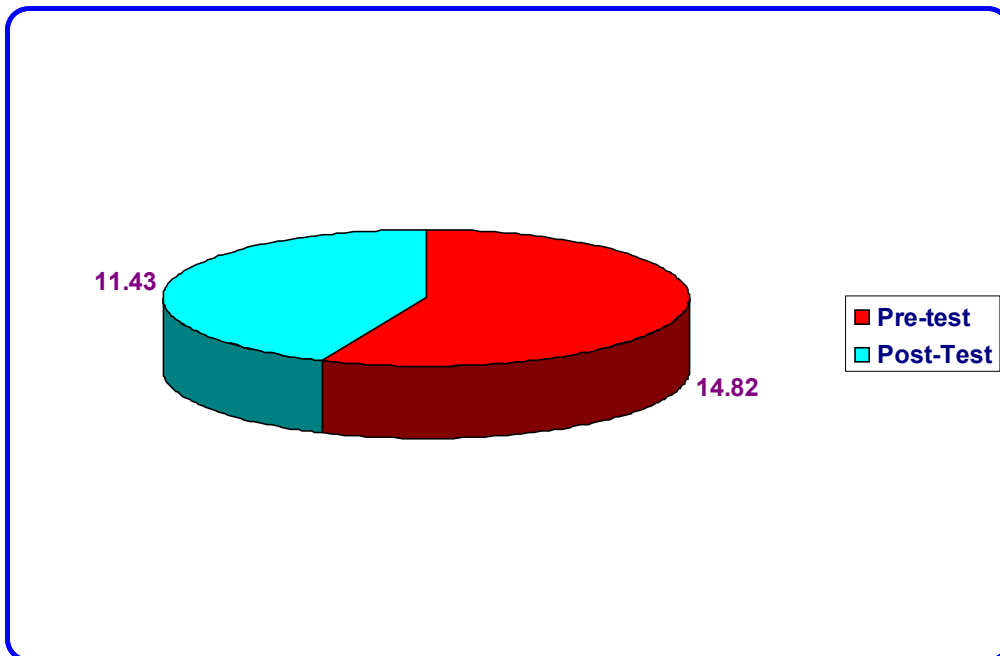


Table-3, shows that with regard to Behavioural Problems predominantly irritability, the mean score of mild intellectually disabled children at pre intervention level (M=14.82) and mean score at post intervention level is (M=11.43) and the t-value is (2.12), which is significant.

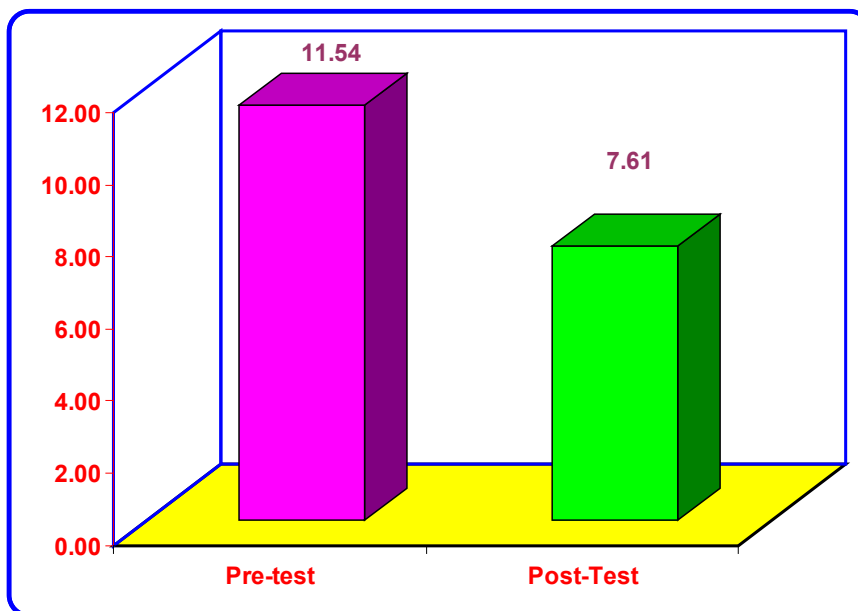
Considering the irritability behavioural problem, intellectually disabled children showed changes only 18 sessions of play therapy. Proving into the effect of play therapy among mild intellectually disabled children the difference in the mean score values between pre–test and post–test was highly significant only after 18 sessions of play therapy.

**Table-4**

**Results on Mean difference between Pre-test and Post-test on Lethargy.**

Lethargy	Pre-test	Post-test	t-value
Number of subjects	28	28	2.57**
Mean	11.54	7.61	
Std. Deviation	7.19	3.68	

\*\*P< 0.01. Significant level



The results on paired-independent sample t-test with regard to Behavioural Problems predominantly Lethargy in Table-4 **shows** that the mean score of the respondents at the Pre –test level is (M=11.54) and Post –test mean score is (M=7.61) the t-value is (2.57), which is highly significant.

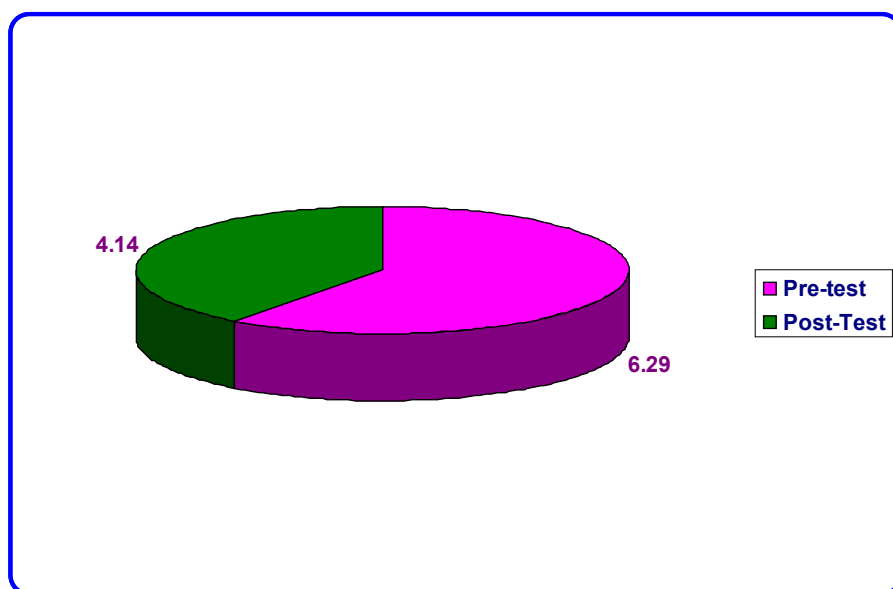
The results obtained indicate a significant difference between Pre-test and post –test scores among the intellectually disabled children respondents with regard to Behavioural Problems predominantly Lethargy.

**Table-5**

**Results on Mean difference between Pre-test and Post-test on Stereotype**

Stereotype	Pre-test	Post-test	t-value
Number of subjects	28	28	1.96*
Mean	6.29	4.14	
Std. Deviation	5.58	2.52	

\* P< 0.05. Significant level



Stereotype behavioural problems of selected intellectual disabled children of the experimental study also followed the same pattern of change like lethargy as shown above. The differences in the mean scores were high between the pre-test and post-test only after 18 sessions of play therapy, the differences were significant. The results on paired-independent sample t-test with regard to Behavioural

Problems predominantly in Table-5, shows that the mean score of the respondents at the Pre –test level is (M=6.29) and Post –test mean score is (M=4.14) the t-value is (1.96), which is significant.

**Table-6**

**Results on Mean difference between Pre-test and Post-test on Hyperactivity**

Hyperactivity	Pre-test	Post-test	t-value
Number of subjects	28	28	4.13**
Mean	18.64	10.86	
Std. Deviation	9.12	4.04	

\*\* P< 0.01. Significant level

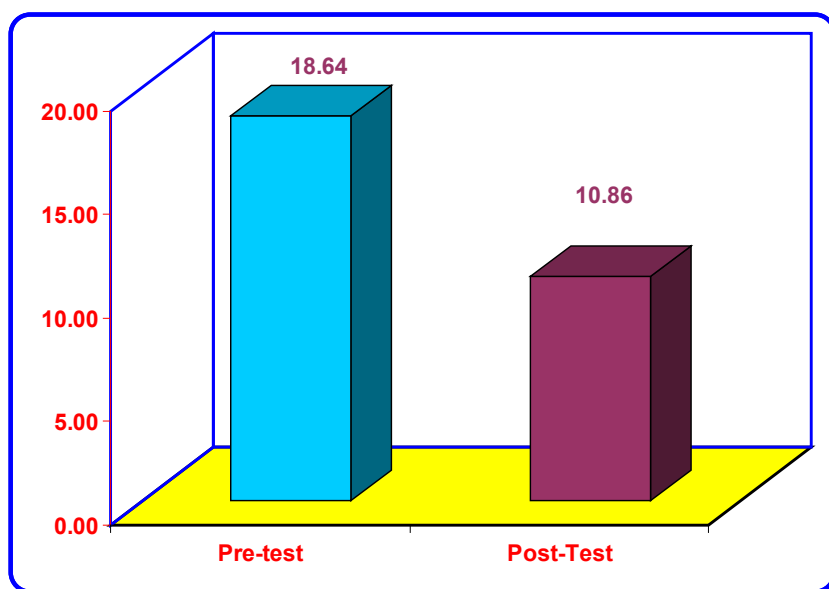


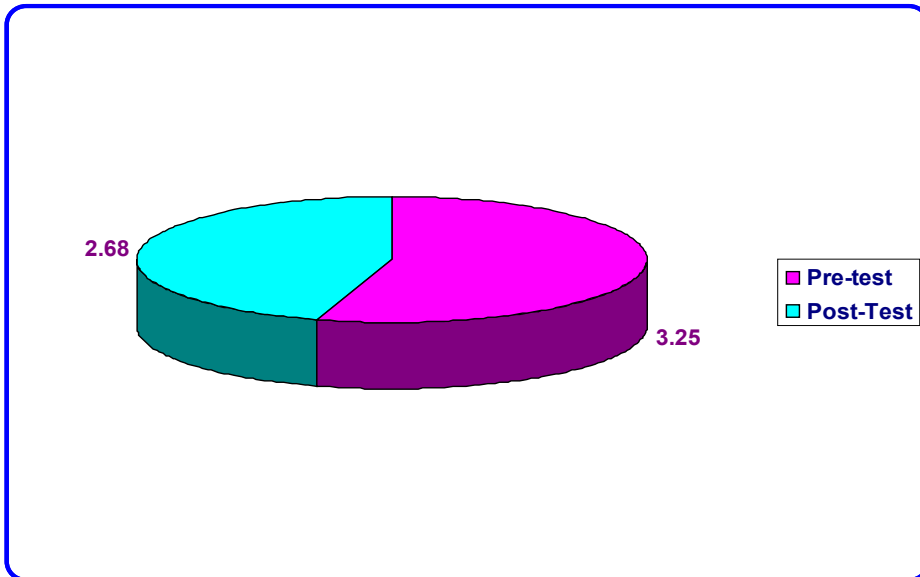
Table-6, shows that, there is a significant difference between Pre-test and post –test scores (the Pre –test level is (M=18.64) and Post –test mean score is (M=10.86)) among the intellectually disabled children respondents with regard to Hyperactivity. Analyzing the effect of play therapy on the behavioural problems between pre-test and post-tests, the mild intellectually disabled children showed drastic changes after intervention. The difference was highly significant (the t-value is 4.13 p < 0.01 level), in the mild intellectually disabled children, the changes were statistically significant only after 18 sessions of intervention.

**Table-7**

**Results on Mean difference between Pre-test and Post-test on**

**Inappropriate speech**

Inappropriate speech	Pre-test	Post-test	t-value
Number of subjects	28	28	0.92
Mean	3.25	2.68	
Std. Deviation	2.96	1.42	



In inappropriate speech, there was no statistical significance observed between the pre and post-tests. There was a slight reduction in the inappropriate speech problems among intellectually disabled children. Table-7, shows that the mean score of the respondents at the Pre-test level is (M=3.25) and Post-test mean score is (M=2.68) the t-value is (0.92). In the mild intellectually disabled children, no significant difference was found in the mean values between the pre-test and post-test. No significant difference between Pre-test and post-test scores among the intellectually disabled children respondents with regard to Behavioural Problems predominantly inappropriate speech.

The results on mean difference between Pretest and Post-test measures on Behavioural problems in intellectually disabled children paired- independent sample t-test showed that with regard to Behavioural problems, Behavioural problems predominantly irritability, Lethargy, Stereo type, Hyperactivity and the mean difference between the pre-test and the post-test scores is highly significant.

The mean values explain that there was a gradual reduction in the problems experienced by the children in all the categories. In Inappropriate speech, there is no significant difference between the pre-test and the post-test scores. This finding indicates the effect of the intervention program on the experimental group.

Therefore, **Hypothesis -2** stating that Play therapy would be an effective intervention in minimizing behavioural problems among mild intellectually disabled children. There would be a significant difference between Pre-test and post –test scores among the intellectually disabled children respondents with regard to all Behavioural Problems. **Hypothesis -2 is accepted**, except inappropriate speech

### **Major findings of the study**

The findings of the study elucidated the following

Stereotype problems are more present in mild intellectually disabled children at severe level. Secondly irritability and hyperactivity were commonly severe problems. In moderately severe level, inappropriate speech problems are higher than other types of behavioural problems. Hyperactivity and Stereotype problems were next common problems in moderately severe problems among mild intellectually disabled children.

### **Effect of Play Therapy on Behavioural Problems**

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 Behavioural problems of Intellectually disabled children, Behavioural problems-predominantly Irritability, Lethargy, Stereotype, Hyperactivity, except Inappropriate speech.



## **Conclusion**

The present study is an attempt to facilitate intellectually disabled children diagnosed with Behavioural problems (Sub-types: Irritability, Lethargy, Stereotype, Hyperactivity, and Inappropriate Speech) with suitable intervention program.

The findings revealed that Psychological interventions such as computer assisted games as play therapy, outdoor games and indoor games were applied to reducing Behavioural problems and Sub types: Irritability, Lethargy, Stereotype, Hyperactivity, and Inappropriate speech. There is an urgent need for establishing school-based mental health program and appropriate screening measure in this environment.

These would afford early identification of intellectually disabled children with behavioural problems and appropriate referral for clinical evaluation and interventions. The need to focus policy making attention on hidden burden of behavioural problems on intellectual disabled children in north costal Andhra Pradesh is essential.

## **Recommendations for Future Research**

The promising findings of this study advance the need for further research into the effectiveness of play therapy as an intervention for reducing behavioral problems for children with disabilities.

A dearth of empirical literature exists on the effects of play therapy interventions with exceptional children, therefore the following recommendations are suggested for future research.

1. Research using computer games and physical games as play therapy intervention for treating behavioral problems for children identified with disabilities in various settings.
2. Studies should further examine whether play therapy is an effective approach for individuals with severe intellectual disabilities.
3. Conduct studies that examine the effectiveness of group play therapy with children with intellectual disabilities and social problems.
4. Conduct computer games-based teacher training studies with special education teachers.
5. Conduct a randomized single subject design study whereby independent observers are blind to the treatment group.

## **Limitation of the study**

1. The efficacy of the intervention program cannot be generalized to remaining areas of Andhra Pradesh and India due to cultural factors.

2. The study used Parents and Teachers reported survey and as such, the results of this study were limited with respect to the accuracy and truthfulness of the parents and Teacher's responses.
3. This study has not examined Behavioural problems among intellectually disabled children in relation to problems such as learning disability, obesity and academic achievement.
4. There was scanty research conducted to find out the prevalence of Behavioural problems and effectiveness of computer assisted games and play therapy on intellectually disabled children with Behavioural problems.
5. This study had positive results, showing a clear drop in behavioural problems with the use of play therapy. However, there were some limitations. First, the number of intellectually disabled children (28) who participated in the study was too small to get a clear sampling of how play therapy might affect on behavioural problems among intellectually disabled children. Future research should include a larger sampling of students to give a better argument that play therapy is a good way to decrease behavioral problems.

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