

Original Research Article

## Effectiveness of Self Structured Intervention on Reduction of Selected Behavioural Problems

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### ABSTRACT

**Objective:** This study was aimed to investigate the level of Inattention and Hyperactivity among orphan children and effectiveness of behavior modification therapy to reduce this problem.

**Methods:** The study was carried out between January and April 2015 and included a total of 60 female Orphan children aged 6-18 years who are not having any physical illness, wherein 30 participants in Experimental and 30 participants in Control group. The Inattention and Hyperactivity of participants was assessed by using standardized NICHQ Vanderbilt assessment scale Parent- Informant developed by 'American Academy of Pediatrics and National Initiative for Children's Healthcare'. It comprises 55 nos. of questions, out of which from 1 to 47 questions are based on symptoms and from 48 to 55 questions are based on performance. The quasi experimental research design and evaluative approach was used in this study and also the sample were selected by using Non probability purposive sampling technique.

**Results:** Major findings of the present study represents that 76.7% of children are predominantly inattentive subtype, 36.6% are having hyperactive/impulsive behaviour and after behavioural intervention these problems was reduced but some extraneous factors also effect the behavior of the children along with the intervention.

**Conclusion:** The study concluded that orphan children belongs to orphan centre have some degree of Inattention and Hyperactivity and the behavioural intervention improve these problems among female orphan children. It is a suitable alternative for children having Inattention and Hyperactivity.

**Keywords:** Inattention; Hyperactivity; Behavioural intervention; Orphan children.

### INTRODUCTION

An orphan is a child permanently bereaved of or abandoned by his or her parents. <sup>(1)</sup> Orphan children face several health problems through physical neglect, poor hygiene and the lack of nurturing in present orphan centres. <sup>(2)</sup>

A study conducted by Prahbjot Malhi and Pratibha Singhi at Chandigarh taking 245 children aged 3-12 yrs who attended outpatient psychology department from a period of 1 year in 1998-99. 8.1%

children had ADHD (DSM-IV criteria), at a ratio of 5:1. 40%, 30% and 30% children showed poor school performance, behavioural problems and hyperactivity consecutively. <sup>(3)</sup>

A study was conducted by Jana M. Kreppner, Thomas G. O'Connor and Michael Rutter at UK by taking 165 children aged 0-42 months of two groups, one who were suffering from early deprivation and other who were not. The Revised Rutter Scales was used by the

teachers and parents to assess the Inattention/Overactivity of children at the age of 6 years for entire samples of Romanian children and, further, at age 4 for UK adoptees found that duration of deprivation have greater effect on Inattention/Overactivity and is correlated with attachment disturbances. <sup>(4)</sup>

A study was conducted by Emily C. Merz and Robert B. McCall by taking 342 children aged 6-18 yrs, from institutions not providing consistent and proper care giving. It was found that high rates of behavioural problems were observed as the age increased. Age of adoption and behavioral problems was subsequently having stronger association. <sup>(5)</sup>

A study was conducted by Hoda elebiary, Sahar G. Behilak, and Ibrahim Kabbash by taking institutionalized children of 84 boys and 30 girls school age children who are separated from their parents and live in the Tanta and El-Mansoura Cities to assess behavioral and emotional problems among institutionalized children. Result found the majority of the participants were defensive, not making friendships with many children, sometimes telling lies, feeling sad, crying, shouting, screaming, and stealing, sometimes biting or pinching others and throwing things at others and also reveals the distribution of institutionalized school age children in relation to hyperactivity, withdrawal, aggressiveness, and disobedience scores. <sup>(6)</sup>

A comparative study conducted by Rachna Devi, Vandana Dogra and Chandra Shekhar at Jammu by taking 120 children whereas 60 from shelter home and 60 from non-shelter home (girls=30 and boys=30) to compare the loneliness and strength difficulties among shelter and non-shelter children. Result found that there is emotional problem, conduct problem; loneliness is found in shelter home children than non-shelter children. Male

were found to be higher on hyperactivity and females on poor social behaviour. Significant positive correlation was found between duration of stay, emotional symptoms and peer problem. <sup>(7)</sup>

342 orphan children living in various orphanages in Dhaka city were assessed for behavioural and emotional disorders by Wasima Rahman, MSI Mullick, Mohammad Asraful Siddike Pathan, Nafia Farzana Chowdhury, Mohamma, Shahidullah, Helaluddin Ahmed et al. 26.9% and 10.2% prevalence of behavioural and emotional disorders were observed within the children consecutively. Overall prevalence of behavioural and emotional disorder were 40.35%. Longer duration of stay and low education with foster care was found to be associated with psychiatric morbidities. <sup>(8)</sup>

The prevalence of Inattention and hyperactivity among deprived children is high. So the researcher felt the need of investigate the Inattention and hyperactivity among orphan children.

Health related intervention provided by medical specialist and preparation programs provided by various adoption agencies has proved improvement of children's health. Moreover, Janet A. Welsh, Andres G. Viana, Stephen A. Petrill, Matthew D. Mathias also found that there is a high risk for behavioural and developmental difficulties in internationally adopted children. <sup>(9)</sup>

Edmund JS Sonuga - Barke, Johanna Koerting, Elizabeth Smith, Donna C McCann, and Margaret Thompson observed that a high chance for reduction in long term impacts of ADHD could be by early detection and intervention. <sup>(10)</sup>

Young children, with conduct disorders were often associated with insufficient emotional competencies and difficulties concerning adequate conflict resolution. At the same time, preschool age is a developmental stage where children begin to acquire many social-

emotional competencies. A quasi-experimental evaluation study was conducted by Ute Koglina & Franz Petermann by taking 90 children aged 3-6 yrs to investigate the short-term effects of behavioral training for preschool children to reduce maladaptive behavior, withdrawn behavior, and to pursue social-emotional competencies. Through the teacher ratings on, behavior problems and social-emotional competencies, after intervention, there seems to be vibrant improvement in emotion regulation skills and academic skills, children became less restless, but aggressive behavior or emotional problems seems no effects. <sup>(11)</sup>

A study was conducted by Nina M Kaiser, Betsy Hoza, and Elizabeth A Hurt by taking Attention-deficit/hyperactivity disorder (ADHD) children. Treatment modalities, conventionally is stimulant medication management, parent training, school consultation or the combination of all reduces the symptoms of children in later life such as impairment in home, school and peer contexts. <sup>(12)</sup>

Above studies showed the effectiveness of behavioural intervention to reduce the Inattention and Hyperactivity among children. Based on this literature the researcher found the need to find the effectiveness of behavioural intervention module to reduce these symptoms.

**Objective:**

**The study aimed to:**

1. Assess the level of Inattention and Hyperactivity among orphan children.
2. To find the effectiveness of behaviour modification therapy to reduce Inattention and Hyperactivity among orphan children.

**MATERIALS AND METHODS**

An evaluative study was conducted between January and April 2015 at Palli Unayan Seva Samiti, Bhubaneswar, and Odisha. A total of 60 female orphan

children (30 in experimental and 30 in Control group) aged 6-18 years with no any other physical illnesses or disabilities that could affect on the researcher intervention in the study. All participants were selected by Non probability purposive sampling technique from the particular orphan centre among 251 female orphans. Behavioural characteristics were assessed by using NICHQ Vanderbilt assessment scale Parent- Informant. <sup>(13)</sup> Results from the questionnaire were scored by using Vanderbilt Parent version scoring instructions. This tool is developed by 'American Academy of Pediatrics and National Initiative for Children's Healthcare' in 2002. It comprises 55 nos. of questions, out of which from 1 to 47 questions are based on symptoms and from 48 to 55 questions are based on performance.

Of the 60 participant, 30 female orphans were take part in the further objective of this study. The 30 participants were provided self-structured behavioural intervention for 10 alternative days which has been validated for use by 7 experts in which the researcher educate to the child about their responsibilities regarding various areas, how to give respects to their elder one, regarding personal hygiene and also educate the care givers regarding some early signs of Inattention and Hyperactivity and measures to prevent these problems. The researcher also used time out and contingency management techniques in this module. This intervention has been shown to be valid and reliable measures for orphan children having Inattention and Hyperactivity. Participants involved in the intervention period for 10 alternative days while continuing with their normal daily activities. The post test was done after 30 days of intervention period. A cut off value of Inattention  $\leq 18$  and Hyperactivity  $\leq 18$  was taken from Vanderbilt Parent version scoring instructions.

Statistical analysis was conducted by using descriptive and inferential statistics. A p value of  $\leq 0.05$  was considered significant. The effectiveness of intervention was checked by using Unpaired 't' and paired 't' test.

The procedure of the study were approved by all participating institutions (Orphan centres). The Authority of the institutions gave written informed consent. Ethical approval for the study was obtained from the Authority of the orphan centres.

## RESULTS

Figure 1 shows the prevalence of Inattention and Hyperactivity among female orphan children in both control and experimental group before and after giving intervention. According to their response 36.7% of children having inattention which was reduced to 13.3% and also 13.3% of children having Hyperactivity which was reduced to 6.7% after intervention. In control group also 40% of children having Inattention, was reduced to 33.3% and also 23.3% children having

Hyperactivity was also reduced to 16.7% without intervention.

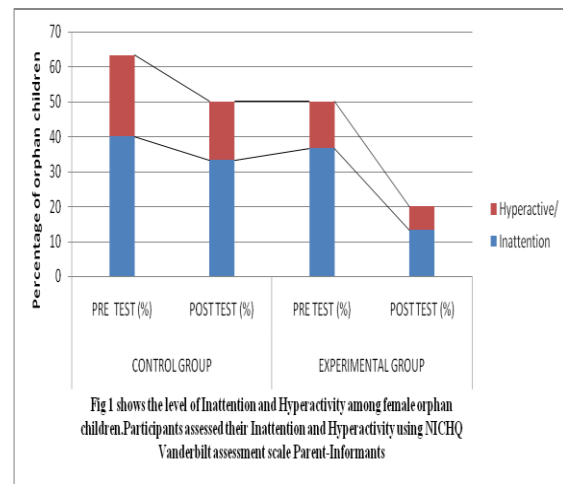


Table 1 shows the significant difference in pre-test and post-test experimental group, result shown that there was a highly significant difference in pre-test and post-test score of experimental group in both Inattention ( $t=4.5$ ,  $p=0.0001$  which is  $\leq 0.05$ ) and Hyperactivity ( $t=2.81$ ,  $p=0.0086$  which is  $\leq 0.05$ ), which shows that the intervention was effective.

**Table 1: Mean, Standard Deviation (SD) & 't' value in between Pre-test and Post-test in Experimental Group (df=29, n<sub>1</sub>=30)**

BEHAVIOURAL PROBLEM SUBTYPES	PRE-TEST		POST-TEST		't' value	p value	Inference
	Experimental group (n <sub>1</sub> =30)		Experimental group (n <sub>1</sub> =30)				
	Mean	SD	Mean	SD			
Predominantly Inattentive	15.2	4.6	13.7	3.5	4.5	0.0001	Very Significant*
Hyperactive/Impulsive	13.7	4.5	13	3.8	2.81	0.0086	Very Significant*

\*p $\leq 0.05$  is significant

**Table 2: Mean, Standard Deviation (SD) & 't' value in between Pre-test and Post-test in Control Group (df=29, n<sub>2</sub>=30)**

BEHAVIOURAL PROBLEM SUBTYPES	PRE-TEST		POST-TEST		't' value	p value	Inference
	Control group (n <sub>2</sub> =30)		Control group (n <sub>2</sub> =30)				
	Mean	SD	Mean	SD			
Predominantly Inattentive	16.1	4.8	15.7	4.8	1.26	0.2177	Not Significant
Hyperactive/Impulsive	14.4	4.1	14	3.8	3.26	0.0028	Very Significant*

\*p $\leq 0.05$  is significant

**Table 3: Mean, Standard Deviation (SD) & 't' value in between Post-test in Experimental & Control Group (df=58, n<sub>1</sub>+n<sub>2</sub>=60)**

BEHAVIOURAL PROBLEM SUBTYPES	Experimental group (n <sub>1</sub> =30)		Control group (n <sub>2</sub> =30)		't' value	pvalue	Inference
	POST TEST		POST TEST				
	Mean	SD <sup>2</sup>	Mean	SD <sup>2</sup>			
Predominantly Inattentive	13.73	11.99	15.67	23.13	1.79	0.0787	Not Significant
Hyperactive/Impulsive	13	14.41	14	14.48	1.02	0.3120	Not Significant

\*p $\leq 0.05$  is significant

Table 2 also shows the significant difference in pre-test and post-test control

group result shown that there was no any significant difference in Inattention

( $t=1.26$ ,  $p=0.2177$  which is  $\geq 0.05$ ), and there was a significant difference in hyperactivity ( $t=3.26$ ,  $p=0.0028$  which is  $\leq 0.05$ ), which shows that without intervention the Inattention was not changed but hyperactivity was reduced among children.

Table 3 shows the significant difference in post test score of both experimental and control group, result shown that there was no any significant difference in inattention ( $t=1.79$ ,  $p=0.0787$  which is  $\geq 0.05$ ) and hyperactivity ( $t=1.02$ ,  $p=0.3120$  which is  $\geq 0.05$ ), which concluded that the Inattention and Hyperactivity among female orphan children in a particular orphan centre was changed due to some extraneous factors e.g., time period, environmental change...etc along with the intervention.

## DISCUSSION

The result of the study suggest that further research on Behavioural problems i.e. Inattention and Hyperactivity among orphan children is needed in Indian. Behavioural intervention was not so much effective in reducing the Inattention and hyperactivity among female orphan children. This finding is contradicted by a study conducted by *Andrea M et al.* at USA on march 2004 by taking 43 child aged 9 years both having ADHD behavior and maladaptive parenting behavior with same sex found that behavioral parent training can improve the inattention among children than maladaptive parenting behavior. <sup>(14)</sup> Another study conducted by *Joshua M Langberg et al* on October 2008 by taking ADHD Children. Researcher used various interventions to manage problems of patients and parents. Contingency management training was used with a view in promoting organizational skills such as management of homework, timing, materials and other general planning. <sup>(15)</sup>

This therefore indicates that another interventions measure is needed to

add along with the behavioural intervention to reduce the Inattention and Hyperactivity among orphan children, increase awareness regarding the early symptoms of Inattention and Hyperactivity among the care takers and programmes aiming to change the lifestyle behaviours of the orphan children.

Among the sample of female orphan children the prevalence of inattention was higher than the hyperactivity between 6-18 years of old.

To the best of the author's knowledge, this study was to use standardized NICHQ Vanderbilt assessment scale Parent- Informant to assess the Inattention and Hyperactivity and also a behavioural intervention module was use to reduce these problems among female orphan children. The use of these tool and module are recommended for further studies to monitor Inattention and Hyperactivity in order to accurately assess the behavioural problems and try to reduce these problems among different children in different setting.

**Strength:** The Quasi-experimental research design and standardized tool was used to assess the Inattention and hyperactivity among female orphan children. The Self - structured module was used for intervention validated by 7 experts the duration of intervention was 10 days long where the follow up was done after 30 days of interval.

**Limitation:** The limitations of this study were small size population and within a short time period. Furthermore all orphan children were Female and it was conducted in a single institution by taking only the age group of 6-18 years. In addition the study the sampling was done by using non probability purposive sampling technique and the data collected were based on verbal response of the subject. These factors may have limited the generalizability of the result. And lastly the major limitation was the contamination of the module is a

possibility as the Experimental and Control group was in the same setting. All of these factors may have affected successful implementation of the module on reducing the Inattention and Hyperactivity among orphan child. Further research with a large sample, among non orphan children and different setting is recommended to enhance understanding regarding the causes, early signs and symptoms and special measures to prevent these symptoms among orphan and non orphan children.

## CONCLUSION

Investigation of the Inattention and Hyperactivity of the female orphan children in a particular orphan centre revealed that most of the orphan children were having Inattention and Hyperactivity. The use of NICHQ Vanderbilt assessment scale Parent- Informant is useful to assess the problematic behaviour among children and behavioural intervention module can be reduce these problems up to some extend but not completely. It is recommended in future studies to accurately monitor the sign and symptoms of Inattention and Hyperactivity among children population group use another intervention measures with this behavioural intervention module to increase its effectiveness .Public awareness of the child behavioural problems is urgently needed along with child health interventions aimed at changing problematic behaviour among all children.

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