A Study to Evaluate the Effectiveness of Behavior Therapy in-Terms of Reduction of Attention Deficit among the School Children with Attention Deficit Disorder Studying in Selected Schools at Madurai

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Abstract: An experimental study was conducted with the aim to reduce attention deficit among school children with attention deficit disorder to evaluate the effectiveness of behavior therapy. Design: The research design used in this study is nonequivalent control group Pre-Test and Post-Test quasi experimental study. Setting: This study was conducted in government schools at Madurai.

Subject: about 60 school children. Methods: the method like structured questionnaire regarding attention deficit disorder among school children and followed by behavior therapy. Result: The study revealed that the mean pre test attention deficit score of the experimental group 31.03, after using behavior therapy, the post test attention deficit score of the experimental group 17.23. The difference between two mean is due to the effect of behavior therapy. The mean post test attention deficit score of experimental group (17.63) was significant lesser than the mean pre test attention deficit score (31.03). The obtained 't' value (t = 9.95) was significant at 0.05 level. The above findings supports the research hypothesis. There was significant association between the mean difference on attention deficit score of the school children with attention deficit disorder and their selected variables such as sex.

Keywords: Effectiveness, behavior therapy, attention deficit disorder, school children

1. Objectives

- To assess the pre-test and post test attention deficit of the school children with attention deficit disorder before and after giving behavior therapy among the experimental group.
- To assess the pre-test and post test attention deficit of the school children with attention deficit disorder among the control group.
- To compare the attention deficit among experimental and control group of school children with attention deficit disorder after giving behavior therapy
- To evaluate the effectiveness of behavior therapy in reducing attention deficit among school children with attention deficit disorder.
- To find out the association between post test attention deficit of the school children with attention deficit disorder and their selected variables (age of the children, sex of the child, educational status of child, birth order, family income, antenatal and natal history of the mother and medical history of the child).

2. Hypotheses

- The mean post test attention deficit score is significantly lesser than the mean pre test attention deficit score among the experimental group who had behavior therapy.
- The mean post test attention deficit score of the experimental group who had behavior therapy will be significantly lesser than the mean post test attention deficit score of the control group.
- There will be a significant association between the mean difference on attention deficit among school children with attention deficit disorder and their selected demographic variables (age of the child, sex of the child, birth order, medical history of child, educational status of child, family income, antenatal and natal history of the mother).

3. Methodology

Research approach
The research approach used for this study was an experimental approach. As described by Polit (2001) experimental approach is a study to explore the dimension of a phenomenon on the develop hypothesis and about the relationship between phenomenon.

Research design:
The research design used in this study is nonequivalent control group Pre-Test and Post-Test quasi experimental study.

Variables
Dependent variables – Reduction of attention deficit
Independent variables – Behavior therapy

Setting of the study
This study was conducted in government schools. Totally two schools were selected. A total of 750 students were there in Madurai city government middle school, Mappalayam and 600 students were there in government middle school, Avaniyapuram.

In Madurai City Government Middle School, Mappalayam there are 1st to 8th standard were there. In that each class having two section A and B. Each section consists of 50 children. Total no of student population in 750 among 250 were female and 500 were male. 53% children were in good
academic performance 32% children were in average and 15% were in poor academic performance.

In Government middle school, Avaniyapuram there are 1st to 7th standard, each class having two section, A and B. In each section 45 children are there. Total no of student population in 600 among 340 were male and 260 were female. 36% children were in good academic performance, 51% children were in average and 13% were in poor academic performance.

Population:
According to Polit and Hungler (1999), a population is defined as the entire aggregation of cases that meets a designated set of criteria.

The population selected for the study consisted of children aged from 6 to 12 years from Madurai City Government Middle School, Mappalayam and Government Middle School, Avaniyapuram.

Sample:
The children with attention deficit from 1st to 7th standard were the samples of the study from Madurai City Government School Mappalayam and Government Middle School, Avaniyapuram.

Description of the tool and scoring procedure:
The tool used for this study includes two parts in part I and part II.

Part I: It consisted of demographic variables of the children which includes age of the child, sex of the child, birth order, education of the child and demographic variables of the mother which includes medical history of children, income, antenatal and natal history of the mother.

Part II: It consists of David Rabiner Rating Scale. It closely examines various neuro developmental functions as well as many components of academic performance health and overall behavior.

Assessment of the attention deficit was done in the following aspects such as:
- Fidgets with hands or feet
- Difficulty remaining seated
- Difficulty waiting turn
- Talks excessively
- Interrupts others
- Easily distracted
- Fails to complete assigned tasks
- Trouble paying attention
- Careless / Massy work
- Does not seem to listen when spoken to

Scoring procedure:

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>A little</td>
<td>1</td>
</tr>
<tr>
<td>Pretty much</td>
<td>2</td>
</tr>
<tr>
<td>Very much</td>
<td>3</td>
</tr>
</tbody>
</table>

A response for the scoring system is children who scored between 0-9 were, categorized under no ADD, between 10-19 were mild, 20-29 were moderate and 30-36 were categorized under attention deficit disorder.

4. Data Collection Procedure

First 10 days samples were selected for the control group in Government Middle School, Avaniyapuram by using stratified random sampling method. 37 samples had attention deficit disorder while using David Rabiner Rating Scale. Out of 37 samples, 30 samples were selected by convenient sampling method and pretest data was obtained.

Next 10 days samples were selected for the experimental group in Madurai City Government Middle School, Mappalayam by using stratified random sampling method. 33 samples had attention deficit disorder while using David Rabiner Rating Scale. Out of 33 samples, 30 samples were selected by convenient sampling method and thus prettest data was obtained.

Post test was done after 10 days for the control group by using David Rabiner Rating Scale and the data was obtained.

Soon after giving pretest, behavior therapy was given on individual basis to the experimental group. Here the researcher used token economy as a star sticker. The child earned rewards and privileges when performing desired behavior and they lost the rewards and privileges when performing unwanted behavior. Post test was done after 10 days by using David Rabiner Rating Scale and the data was obtained.

5. Data Analysis and Interpretation

Comparison of mean pre test and post test attention deficit of experimental group

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre test</td>
<td>30</td>
<td>31.03</td>
<td>0.85</td>
<td>t = 9.959*</td>
</tr>
<tr>
<td>Post test</td>
<td>30</td>
<td>17.63</td>
<td>7.23</td>
<td>p = &lt;0.001</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level
To find out whether there are any difference between the mean pre test and post test attention deficit experimental group, the null hypothesis is stated as follows.

In the present study, there will be no significant difference between the pre test and post test attention deficit of experimental group.

Table 7 shows that the mean pre test attention deficit score of the experimental group 31.03, after using behavior therapy, the post test attention deficit score of the experimental score 17.23. This indicates that the difference between the mean is true difference and has not occurred by chance. The difference between two mean is due to the effect of behavior therapy. The above findings supports the research hypothesis. Hence the researcher rejects the null hypothesis.

6. Major findings of the Study

- Regarding age of the children 33.3% were between 6 – 8 years of age, 33.3% were between 8 – 10 years of age, 33.3% were between 10 – 12 years of age.
Regarding sex 91.7% of children were males and 8.3% were female.
Regarding the educational status of the children 31.7% were between I to II std, 35.0% were between III to IV std, and 33.3% were between V to VI std.
Regarding the birth order of the children 45.0% were first born child, 31.7% were second born child and 23.3% were third and above.
Regarding income 68.3% of the families earned between Rs. 1000 – 2000 per month, 23.3% earned between Rs. 2001 – 3000, and 8.3% earned between Rs.3001 and above.
Regarding antenatal history of the mother 21.7% had psychological factor, 18.3% had physical factor, 28.3% had environmental factor, and 31.7% were healthy.
Regarding natal history of the mother 21.7% had caesarian and 78.3% had a normal vaginal delivery.
Regarding medical history of the child 16.7% had a sensory impairments, 26.7% had a malnutrition and 56.7% were healthy.

The mean post test attention deficit score of experimental group (17.63) was significant lesser than the mean pre test attention deficit score (31.03). The obtained ‘t’ value (t = 9.95) was significant at 0.05 level.
There was significant association between the mean difference on attention deficit score of the school children with attention deficit disorder and their selected variables such as sex. There was no significant association between the mean difference on attention deficit score of the school children with attention deficit disorder and their selected variables age, education and birth order of the child, income, antenatal and natal history of the mother and medical history of the child.

7. Conclusions
The following conclusions were drawn from this study
1) There was an improvement in attention deficit after intervention strategy.
2) The study proved that there was improvement in reducing attention deficit of children after intervention strategy.
3) After administration of behavior therapy in terms of ‘Token Economy System’, there was an improvement in the attention deficit of the children.