CHAPTER 3

METHODOLOGY

OUTLINE:

3.1 Research Questions.
3.2 Operational definitions and rationale for inclusion of the selected variables.
3.3 Method.
3.3.1 Sample
3.3.2 Research Hypotheses.
3.3.3 Tools used.
3.3.4 Details of the intervention process to be conducted.
3.3.5 Method of Analyses.
3.1 Research Questions:

The primary question of interest concerned which mode of psychotherapeutic intervention i.e. behavioural or multimodal intervention would be supported. Given the existing findings, it is expected that the ADHD children would be benefitted from both forms of interventions. Then a related question evolves which one is more effective? Given the lack of studies that have taken both the forms of intervention to study its efficacy, no specific predictions were made regarding the relative effectiveness of such interventions.

3.1.1 The primary objective of the study is:

To determine the comparative efficacy of combined behavioural-pharmacological interventions and multicomponent-behavioural-pharmacological-treatments (Multimodal) on reducing ADHD symptoms and in enhancing overall family ambience.

3.1.1 The Specific Objectives of the Study:

- Comparative efficacy of Multimodal and Behavioural interventions on ADHD symptoms.
- Comparative efficacy of the two interventions on reducing family pathology.
- Comparative efficacy of the two interventions in reducing parental trait anxiety.
- Comparative efficacy of the two interventions in improving marital quality of the parents.
- Comparative efficacy of the two interventions on improving parenting style.
- Comparative efficacy of the two interventions on increasing General Well-Being of parents.
3.2 Operational definitions and rationale for inclusion of the selected variables. (Table 3.1)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>OPERATIONAL DEFINITION</th>
<th>RATIONALE FOR INCLUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Pathology</td>
<td>The family pathology indicates the extent to which maladaptive behaviour is present amongst the family members in their interaction with each other.</td>
<td>Research findings suggest that children with ADHD had greater family adversity than control (Baxter, 2013). In the present research, family pathology variable is included to see how it gets affected by two different forms of psychotherapeutic interventions.</td>
</tr>
<tr>
<td>Marital Quality</td>
<td>The subjective evaluation of a married couple’s relationship on a number of dimensions like marital success, adjustment, happiness, satisfaction, sharing, consensus, companionship.</td>
<td>Marital satisfaction in parents of ADHD children is less than parents of normal children. (Zarei et al. 2010). Too much of time allocation for parenting an ADHD child, the parents don’t have their own private couple time.</td>
</tr>
<tr>
<td>Parenting Style</td>
<td>Parenting style denotes the extent of parents’ demandingness (control, supervision and maturity demands) and responsiveness (warmth, acceptance and involvement) in overall development of the child.</td>
<td>Parents of ADHD children found to have high levels of authoritarian parenting styles, and parents reported less parenting satisfaction, weak parental alliance, poor parenting self-efficacy than did normal controls.</td>
</tr>
<tr>
<td>Parental Trait Anxiety</td>
<td>Trait anxiety may be defined as general feelings of anxiety, tension, nervousness, worry and high reactivity to perceived stress</td>
<td>Being a parent to an ADHD child is a challenging and frustrating task. Parents perceive their child’s future as unpredictable and uncontrollable thus increase their trait anxiety level.</td>
</tr>
<tr>
<td>General Well-Being</td>
<td>Subjective feeling of contentment, satisfaction with life’s experiences, sense of achievement, utility, belongingness and no distress, dissatisfaction or worry.</td>
<td>Living with a child with a disability is perceived as a permanent stressor to the family. In a long-term perspective, this may affect the well-being of family members especially parents (Seltzer et al. 2001).</td>
</tr>
</tbody>
</table>
3.3 METHOD

3.3.1. SAMPLE

The 20 participating ADHD families consisted of biological parents and at least one child meeting DSM-IV TR ADHD Combined Type criteria (APA, 2000). The recruitment of children with ADHD included referred participants; came from local Kolkata-based psychiatrists in private practice. Selection was random, except that children of the same age range were selected and that children were matched in regard to the proportion of boys and girls. All children were diagnosed by the psychiatrist as well as by the researcher by administering ADHD screening diagnostic tool. All parents gave written informed consent prior to the start of the study. The study was approved by the Bio Ethics Committee for human and Animal Research Studies, C.U.

Fig. 8. Hypothesized linkage among the selected variables based on prior literature.
All the participants were selected on the basis of the following criteria: (Table 3.2)

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ADHD (Combined Type) diagnosis based on DSM-IV TR diagnostic criteria.</td>
<td>• Having any physical disability.</td>
</tr>
<tr>
<td>• Children aged between 6 and 10 years.</td>
<td>• Having history of any psychiatric illness.</td>
</tr>
<tr>
<td>• Children attended mainstream schools.</td>
<td>• With history of psychological intervention.</td>
</tr>
<tr>
<td>• Average intelligence level of children.</td>
<td>• Presence of co-morbid psychiatric disorders (for children) such as conduct disorder, oppositional defiant disorder, learning disability etc.</td>
</tr>
<tr>
<td>• Children were under medication.</td>
<td>• History of chronic physical illness and organic ailment.</td>
</tr>
<tr>
<td>• Both parents alive, staying with their children.</td>
<td></td>
</tr>
<tr>
<td>• Parents living in Kolkata and surroundings.</td>
<td></td>
</tr>
<tr>
<td>• Parents’ education: minimum 12th standard.</td>
<td></td>
</tr>
</tbody>
</table>

3.3.2. RESEARCH HYPOTHSES

In accordance with previously reviewed literature, the hypotheses of this study were as follows:

**Hypothesis 1:** Participants provided with multimodal therapy differ significantly in pre-post treatment change with respect to ADHD symptoms severity from behavioural therapy group.

**Hypothesis 2:** Multimodal therapy group would differ significantly with respect to family pathology pre-post treatment change measure from the behavioural intervention group.

**Hypothesis 3:** Significant differences in the pre-post treatment outcome measure of parenting style between the two groups provided with two different modes of interventions.

**Hypothesis 4:** Multimodal therapy group would differ significantly with respect to marital quality pre-post treatment change measure from the behavioural intervention group.

**Hypothesis 5:** Significant differences in the pre-post treatment outcome measure of parents’ trait anxiety level between the two groups provided with two different modes of interventions.

**Hypothesis 6:** Significant differences between the two groups with respect to the general well-being measure after provided with two different therapeutic interventions.
3.3.3. TOOLS USED:

In the present research, self-report standardized questionnaires were used to obtain information from the subjects. Informations were also gathered using case history and interview technique.

3.3.3.1. Information Schedule

A socio-demographic data sheet (Appendix A) was especially prepared for this work; it includes both parents and child-related items such as age, gender, education, treatment duration, nature of treatment. Information on physical and mental illness and the like. The demographics questionnaire was administered only once.

3.3.3.2 ADHD Symptom Checklist – 4 (ADHD - SC4)

Administration:

It is a self-administered screening instrument (DSM-based symptom checklist) for the behavioural symptoms of AD/HD and oppositional defiant disorder (ODD), developed by Kenneth D. Gadow and Joyce Sprafkin (1997). The ADHD-SC4 is available in both a parent and a teacher version. In the present study, parent version was used. Respondents were asked to a tick (✓) on any of the four responses i.e, ‘Never’, ‘sometimes’, ‘often’ and ‘very often’.

Scoring:

Screening Cutoff score method: the total number of symptoms rated as being of concern for a specific disorder (Symptom Count Score) is then compared with the Symptom Criterion Score to render a diagnosis. The second scoring method is the Symptom Severity score method, for which items are scored as follows: Never = 0, Sometimes = 1, Often = 2 and Very often = 3. The score for each item is summed to generate a Symptom Severity score for each category.
Reliability and Validity:

Test–retest reliabilities (6 weeks interval) for the ADHD and ODD categories were all highly significant (p<0.0001). Correlations for the Symptom Count and Symptom Severity scores, respectively, were as follows: AD/HD Inattentive Type (r=0.67, r=0.76), AD/HD Hyperactive-Impulsive Type (r=0.72, r=0.82). The predictive validity was assessed by comparing parent-version scores with data-based psychiatric diagnoses. The concurrent validity was examined by comparing the scores of the parent-completed Checklist with scores from the Child Behavior Checklist and the MOMs Checklist (Loney, 1984).

Selection of the Tool:

This tool is selected for screening purpose for the behavioural symptoms of attention deficit/hyperactivity disorder (AD/HD) and oppositional defiant disorder (ODD). Apart from using as a screening tool, it is also utilized to measure changes in symptoms over time in children after therapeutic interventions received.

3.3.3.3 Ravens Coloured Progressive Matrices (RCPM)

Administration:

Developed by Raven et al. (1986). It is a widely used nonverbal intelligence test for younger children. In each test item, one is asked to find the missing pattern in a series. The three sets of twelve problems presented on a coloured background get progressively harder, requiring greater cognitive capacity to encode and analyze.

Scoring:

The piece a child points to as his final choice counts “right” or “wrong”. The total score is the sum of the right choice made by the child.
Reliability and Validity:

A split-half reliability estimate of 0.90 was reported (Jensen, 1974). The test-retest reliability (2-3 weeks interval) was found to be 0.86 and 0.71 after one year (Khatena and Gowan, 1967). Various cultural contexts, including Africa, India have yielded validity data typically around 0.60 to 0.70 (Ghuman, 1978). When compared the suitability of CPM with Terman-Merrill test of Intelligence it was found to be .096 with disturbed children and 0.59 with normals.

Selection of the Tool:

This tool is selected to know the intellectual functioning of the child. A child with below average intelligence level is not considered in the present research.

3.3.3.4 QUICK NEUROLOGICAL SCREENING TEST (QNST-II) (Mutti et al. 1998).

Administration:

The QNST-II is an individually administered screening instrument designed to assess areas of neurological integration as they relate to learning. The test consists of a series of 15 brief tasks. Administration of this test has few requirements. The only materials needed are a pen, a table, and a chair. Following are the subtests:

<table>
<thead>
<tr>
<th>Hand skill</th>
<th>Figure Recognition and Production</th>
<th>Palm Form Recognition.</th>
<th>Eye Tracking.</th>
<th>Sound Patterns.</th>
</tr>
</thead>
</table>
Scoring:

Under each subtest are relevant tasks to which a weighted score of either 1 or 3 has been assigned. Scores of 1 can be influenced by developmental, environmental or emotional factors and are probably not indicative of neurological abnormality. Scores of 3 are associated with more severe learning difficulties and can be related to neurological dysfunction. For each subtest, the task scores are added, and then the sum of all subtests is computed.

Reliability and Validity:

The test-retest reliability (one-month interval) yielded a coefficient of 0.81. Inter-rater reliability also at a one-month interval yielded a coefficient of 0.71. The scale has sufficient construct and concurrent validity. QNST-II was compared to Brain Injury Factors from the Bender Visual Motor Gestalt Test for Children, a correlation of 0.51 was found.

Norm:

A severe discrepancy is indicated by a total score exceeding 50. Score between 26 and 50 indicate moderate discrepancy. A normal range score is indicated by a total of 25 or less.

Selection of the Tool:

This tool will help to understand the neurological basis for learning and behaviour problems. Children with ADHD who scored within the normal range were selected.

3.3.3.5 Family Pathology Scale (FPS)

Administration:

A self-administered scale developed by Veeraraghavan V. and Dogra A. (2000). There are 42 items in the scale to be responded by the parents by marking a tick (√) on any of the three
responses i.e, ‘most often’, ‘occasionally’ and ‘never’. They are asked not to omit any item from the scale. All items should be truly answered without inhibition.

**Scoring:**

Items indicative of ‘high family pathology’ were given 3 by ticking most often, ‘moderate family pathology’ given 2 points by ticking on occasionally and ‘no family pathology’ was assigned a score of 1 by ticking (✓) never response. Total score ranged between 42-126, with higher score indicating higher family pathology and lower score indicating the reverse.

**Reliability and Validity:**

The test-retest reliability was estimated to be $X_{tt} = 0.63$, with an index of reliability $X_{ii} = 0.79$. The face validity of the questionnaire appeared to be fairly high, as the items were prepared following intensive interviews of 300 couples regarding the extent of family pathology present in the family. The content validity was adequately assured as only those items were selected for the initial scale for which there was complete agreement amongst the experts.

**Norm:**

High family pathology is indicated by scores 99-128; moderate family pathology being between 64-98 and the scores below 64 are indicative of low or without pathology.

**Selection of the Tool:**

This tool was selected and administered to parents of children with ADHD to understand the extent of family dysfunction. The scale is standardized in Indian population. The scale was administered twice to analyze the pre and post treatment change.
3.3.3.6 Marital Quality Scale (MQS)

Administration:

It is a multidimensional scale developed by Anisha Shah (1995). It is self-administered scale, has 50 items in statement form, with a four-point rating scale. The male and female forms are present. The scale has 28 positively worded items and 22 negatively worded items. It measures 12 factors: the following 5 factors have only positive worded items: Understanding, Satisfaction, Decision Making, Trust and Role-Functioning. Factors of Rejection, Despair, Discontent, Dissolution-Potential and Dominance have only negatively worded items. Factors of Affection and Self-Disclosure consist of both positively and negatively worded items.

Scoring:

The total score is summation of scores obtained on individual items. The scale provides two types of scores. 1) Total scale score and 2) Scores on the 12 factors of the scale. The range for the total score is 50-200. Higher score indicates poor quality of marital life. Scoring key for 12 factors of MQS:

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>Positive Item Nos.</th>
<th>Negative Item Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNDERSTANDING</td>
<td>21, 30, 31, 37, 38, 47, 48</td>
<td>NIL</td>
</tr>
<tr>
<td>REJECTION</td>
<td>NIL</td>
<td>2, 3, 5, 11, 15, 18, 34, 40, 44</td>
</tr>
<tr>
<td>SATISFACTION</td>
<td>4, 9, 10, 12, 27.</td>
<td>NIL</td>
</tr>
<tr>
<td>AFFECTION</td>
<td>13, 28.</td>
<td>32, 33, 35, 45.</td>
</tr>
<tr>
<td>DESPAIR</td>
<td>NIL</td>
<td>14, 41.</td>
</tr>
<tr>
<td>DECISION MAKING</td>
<td>1, 8, 16, 17, 46, 50.</td>
<td>NIL</td>
</tr>
<tr>
<td>DISCONTENT</td>
<td>NIL</td>
<td>19, 20</td>
</tr>
<tr>
<td>DISSOLUTION</td>
<td>NIL</td>
<td>22</td>
</tr>
<tr>
<td>POTENTIAL</td>
<td>NIL</td>
<td>7, 23</td>
</tr>
<tr>
<td>DOMINANCE</td>
<td>NIL</td>
<td>6</td>
</tr>
<tr>
<td>SELF-DISCLOSURE</td>
<td>25, 26</td>
<td>NIL</td>
</tr>
<tr>
<td>TRUST</td>
<td>39</td>
<td>NIL</td>
</tr>
<tr>
<td>ROLE FUNCTIONING</td>
<td>29, 36, 43, 49.</td>
<td>NIL</td>
</tr>
</tbody>
</table>

Reliability and Validity:

The scale has high internal consistency (coefficient alpha = 0.91) and high test-retest reliability (r = 0.83 over a 6 weeks interval). The scale has well established content and construct validity.
A study demonstrates the clinical validity of the Marital Quality Scale; it shows that the clinical
group with marital disharmony scores significantly higher than the normal group on the total
score on the scale as well as on 11 of the 12 factors of the Marital Quality Scale (Shah, 1995).

**Norm:**
The range for the total score is 50-200. Higher score indicates poor quality of marital life.

**Selection of the Tool:**
Marital disharmony in a couple is well brought out on the Marital Quality Scale. This tool has
been selected to understand the marital relationships of parents with ADHD child. Having a
child with ADHD may impose higher psychic costs on the parents or may also affect the parents’
relationship positively by bringing the family closer together (Reichman et al., 2008). This scale
was also administered twice; in order to understand the pre and post treatment change.

**3.3.3.7 PARENTING STYLE SCALE (PSS)**

**Administration:**
A self-administered questionnaire designed by Pawel and Dillon (2000). It includes 11 items
evaluating five parenting styles: Power Patrol, Perfectionistic Supervisor, Balanced,
Overindulger and Avoider. Each item has five options each showing different types of parenting.
The respondents are given the instruction to complete all the statements by marking a tick (√) on
any of the five responses. They are asked not to omit any item from the scale.

**Scoring:**
There are five totals--one for each of the five parenting styles. The highest score shows one’s
dominant parenting style.
**Power Patrol:** Add 1 point for every (a.) answer on questions 1 through 5, and 1 point for every (c.) answer on questions 6 through 11.

**Perfectionistic Supervisor:** Add 1 point for every (b.) answer on questions 1 through 5, and 1 point for every (d.) answer on questions 6 through 11.

**Balanced:** Add 1 point for every (c.) answer on questions 1 through 5, and 1 point for every (a.) answer on questions 6 through 11.

**Overindulger:** Add 1 point for every (d.) Answer on questions 1 through 5, and 1 point for every (e.) Answer on questions 6 through 11.

**Avoider:** Add 1 point for every (e.) answer on questions 1 through 5, and 1 point for every (b.) answer on questions 6 through 11.

**Reliability and Validity:**

This scale has sufficient reliability and validity. Punyadasa and Samarakkody (2016) used this scale on a community-based descriptive cross-sectional study.

**Selection of the Tool:**

The tool was selected to understand the child-rearing practices of parents of children with ADHD and the extent of parenting similarities existing in the families. Stronger the parental alliance lesser will be the child-rearing disagreement. This scale was also administered twice to understand the pre and post treatment change.

**3.3.3.8 STATE TRAIT ANXIETY INVENTORY (STAI) – FORM X2 (TRAIT SCALE)**

**Administration:**

A self-administered questionnaire designed by Spielberger et al. (1970). This is a 20 item test; the parents were told to complete all the statements by marking a tick (✓) on any of the four
responses. It was emphasized that there was nothing ‘right’ or ‘wrong’ about these items. There are two forms, X-1 measures state anxiety and X-2 measures trait anxiety. In the present research, X-2 form was used. Trait anxiety referred to relatively stable individual differences in anxiety proneness, it is like potential energy, indicates differences in strength of a latent disposition to manifest a certain type of reaction.

**Scoring:**
The total score is summation of scores obtained on individual items. The scale has 13 positively worded items and 7 negatively worded or reversed items. Items were given 1 by ticking ‘never’, ‘sometimes’ given 2 points; by ticking on ‘usually’ and ‘almost always’ was assigned scores of 3 and 4 respectively. For reverse items i.e. 1, 6, 7, 10, 13, 16 and 19 reverse scoring is done.

**Reliability and Validity:**
The test-retest correlations for the T-Anxiety scale were reasonably high for the college students, ranging from 0.73 to 0.86, but somewhat lower for the high school students, ranging from 0.65 to 0.75. The internal consistency found to be high as measured by alpha coefficients correlations. Correlations between the T-Anxiety scale, the IPAT Anxiety Scale and Taylor Manifest Anxiety Scale (TMAS) were relatively high, ranging from 0.73 to 0.85.

**Selection of the Tool:**
This tool is used to measure the trait anxiety level of parents and how it gets affected after intervention. Anxious parents display significantly less positive affection towards their children than the control group; thus serves as an important factor for early intervention programme.
3.3.3.9 PGI General Well Being Measure:

Administration:
A self-administered questionnaire designed by Verma & Verma (1989). This scale consists of 20 items. Parents were given the instruction to complete all the statements which were applicable to them by marking a tick (✓) on those items.

Scoring:
Numbers of ticks are counted and constitute the well-being score of that individual at that time.

Reliability and Validity:
The scale showed good inter-rater (0.86, p<0.01) and inter-scorer (1.0, p<0.01) reliabilities (Moudgil, et al. 1986). Reliability was measured by K.R 20 formula and was found to be 0.98 (p<0.01) (Verma et al. 1983). Test-retest reliability was 0.91 for the English version. The test was correlated with a number of tests in several studies. The scale showed relative independence of other variables as expected but showed significant relations with another Well-being Scale.

Selection of the Tool:
This tool was selected to measure general well-being of parents of children with ADHD. Living with a child with a disability is perceived as a permanent stressor to the family and it affects all aspects of family life. In a long-term perspective, this may affect the well-being of family members (Seltzer, et al., 2001). Moreover, low level of well-being of parents directly related to increased parental stress and as a result intensifies ADHD symptoms. This scale was also administered twice to analyze the pre and post treatment change.
3.3.4 DETAILS OF THE INTERVENTION PROCESS TO BE CONDUCTED

All the sessions of both the groups were conducted by the researcher herself who is a registered Clinical Psychologist and each session was supervised by her supervisor who herself is a renowned practitioner Clinical Psychologist.

Initially the 20 participating ADHD families were randomly divided into two groups: Group A and Group B. Each group consisted of 10 children diagnosed with ADHD Combined type and included both of their parents. Each group undergone baseline assessment and then psychological intervention continued for 10 sessions. Intervention was provided on an individual-family basis. Group A received Behavioural intervention and Group B received Multimodal intervention. After the end of each session, both the groups were provided with homework assignments, attention-enhancing games booklet and written handout summarizing the main points discussed in the session. After the completion of 10th session, post-intervention assessments were conducted. Pre and post treatment change was statistically analyzed.

GROUP A
Conducted: Behaviour Therapy

| Number of Sessions: 10 |
| Spacing: Once a week. |
| Duration of each session: 60mins (aprox.) |

Rationale for selection of this Approach:
Behaviour Therapy uses the application of experimentally established principles of learning. It is a most commonly used intervention for ADHD. (Abramowitz et al. 1992). This conventional mode of intervention is selected to compare its effectiveness with the multimodal treatment.

GROUP B
Conducted: Multimodal Therapy
(Multicomponent-Behaviour Therapy)

| Number of Sessions: 10 |
| Spacing: Once a week. |
| Duration of each session: 60 mins (aprox.) |

Rationale for selection of this Approach:
- To analyze the problem from a broader perspective.
- To study its efficacy.
- To provide holistic-based care.
### 3.3.4.1 Therapeutic Concepts used in both the Interventions (Table 3.3)

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concepts</td>
<td>Rationale</td>
</tr>
<tr>
<td><strong>Psychoeducation</strong> (Information model – Zipple and Spaniol, 1997).</td>
<td>Purpose is to improve the family’s awareness about the illness and their contribution to management.</td>
</tr>
<tr>
<td><strong>Behavioural case formulation</strong> (Antecedent-Consequences-Behaviour Model)</td>
<td>Behavioural case formulation describes child’s strengths, stressors and explains why the problems have developed.</td>
</tr>
<tr>
<td><strong>Reinforcement</strong></td>
<td>Failure to reinforce appropriate behaviour may result in behavioural excesses or deficits or anomalies.</td>
</tr>
<tr>
<td><strong>Discrimination</strong></td>
<td>Discrimination is the ability to react differently depending upon the stimulus condition.</td>
</tr>
<tr>
<td><strong>Punishment</strong></td>
<td>Providing aversive stimuli immediately after undesired act occurred helps in reducing undesirable behaviour.</td>
</tr>
<tr>
<td><strong>Shaping</strong></td>
<td>Breaking of larger task into a smaller one helps the child to sense time and self-organize.</td>
</tr>
<tr>
<td><strong>Token Economy</strong></td>
<td>Tokens, points, privileges or other potent rewards often have to be used to motivate the child to behave well.</td>
</tr>
<tr>
<td><strong>Response Cost</strong></td>
<td>Tokens are earned for particular behaviour; tokens can also be withdrawn for inappropriate behaviour.</td>
</tr>
</tbody>
</table>
3.3.4.2 ATTENTION GAMES

After each session, the therapist provided attention games in the form of booklets to the parents of both the groups as between-session assignments. Attention games are activities selected from previous research findings and subtests from several standardized psychological tests which directly or indirectly found to sustain attention. The purpose of its inclusion in the present research was not to cognitively retrain the child; performances were not evaluated and statistically analyzed rather such tasks were used to increase positive engagement of the child with his parents in a structured way. It has been found that attention games which are enjoyable, inexpensive, easy to implement, might not only influence parent-child interaction patterns but might also enhance academic interest and performance (Hall et al. 2002).

Methodology followed in structuring attention games:

- Paper-pencil tasks were arranged keeping in mind the participants’ age range.
- Parents were informed to seat with the child with the specific attention kit provided for that specific day. Not to expose the games of consequent days.
- Allow the child to finish the games assigned each day. There is no time limit.
- Initially for the first few sessions, presentation was made colourful to engage the child.
- Number of games increased in later sessions to sustain child’s attention.
- Gradually, games are selected in a way that it resembles the academic framework of a child - the underlying notion is to ‘study’ in terms of ‘play’.
- From sixth session, paper-pencil tasks got changed to daily life attention-enhancing activities.
- In Eighth and Ninth Sessions, number of activities got reduced – parents were encouraged to generate their own strategies of enhancing child’s attention span.
- Attention games were structured in the present study in such a way so that parents were helped to believe that ADHD is a chronic problem, focus should be on moving beyond ‘session-bound intervention’ and to develop their own tailor-made attention enhancement strategies.
Rationale for the inclusion of the following Attention Games: (Table 3.4)

<table>
<thead>
<tr>
<th>Attention Games Selected</th>
<th>Rationale for Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colouring</td>
<td>Colours attract and help in sustaining attention because it is concrete, imagery-provoking, or proximal in a sensory, temporal or spatial way (Nisbett and Ross, 1980). A study by Imhof (2003) found that students with ADHD showed improved control of attention and motor processes when using coloured paper.</td>
</tr>
<tr>
<td>Copying (Handwriting)</td>
<td>The skill of handwriting includes visual perception, orthographic coding, motor planning and execution, kinaesthetic feedback and visual-motor co-ordination. Children with ADHD demonstrated significantly more total time including in-air time spent in handwriting performance when off medication (Rosenblum et al. 2008).</td>
</tr>
<tr>
<td>Figure copying tasks</td>
<td>Such tasks are used to measure ‘higher order visual processing’ that includes perceptual skills used for shape and object detection; spatial skills used to understand relationships and position of objects and constructional skills used to interact with the visual environment by building, drawing or assembling (Lezak et al. 2004).</td>
</tr>
<tr>
<td>Free drawing</td>
<td>Drawing from memory is generally regarded to be a complex task with visual imagery as a core feature. van Sommers’ model of copying and drawing (1989) comprised four hierarchically organized components: depiction decisions (this is non-essential when copying), production strategy, contingent planning and articulatory/economic constraints.</td>
</tr>
<tr>
<td>Matching Tasks</td>
<td>Matching tasks requires individuals to inhibit impulsive responses and ignore aspects of the stimuli. Ability to ignore irrelevant task colours and figures ensures executive functioning ability.</td>
</tr>
<tr>
<td>Cancellation Tasks</td>
<td>Cancellation tasks require the ability to quickly and accurately scan rows of printed stimuli, thus performance relies on motor processing, visual-motor integration and visual scanning (Woodcock et al. 2001). ADHD group made significantly more commission errors and displayed a longer latency to task completion (DeWolfe et al. 2000).</td>
</tr>
<tr>
<td>Coding</td>
<td>Coding tasks are used to assess information processing speed and visual perception. It is related to working memory in that increased processing speed decreases the amount of information a child must “hold” in working memory; whereas, lower processing speed impairs the effectiveness of working memory by requiring the child to “hold” in working memory more information than the child can effectively process at a given time.</td>
</tr>
<tr>
<td>Story Comprehension</td>
<td>Stories increase children’s concentration; effective in improving their social skills and behaviour (Javdan et al. 2015). Story comprehension requires ability to allocate attention to plot-relevant information, monitor comprehension, use the story to retrieve significant story events, and create story representations that reflect causal connections among events (Nezworski et al. 1982; van den Broek, et al. 1996). In addition, story comprehension requires the ability to understand character goals, story themes, and plans (Schank and Abelson, 1977). Children with ADHD have a deficit in integrating story information based on causal links.</td>
</tr>
<tr>
<td>Story telling tasks</td>
<td>Children with ADHD may have had more trouble producing a goal plan when given no story structure which resulted in the production of less coherent narratives. The child may have problems connecting the end of the story to the beginning of the story. A specific language skill that tends to be problematic for children with ADHD is the ability to produce and comprehend stories (Tannock and Schachar 1996).</td>
</tr>
<tr>
<td>Attention Games Selected</td>
<td>Rationale for Selection</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Digit Forward Task</td>
<td>Such task requires children to mentally encode and immediately recall series of verbally presented numbers in the serial order. Children with ADHD have difficulty in getting alert to the verbal stimulus and to maintain that alertness or attention throughout the task (Smitha et al. 2014).</td>
</tr>
<tr>
<td>Sentence Recall Task</td>
<td>Lust et al. (1996) stated that the sentence repeated is not a passive copy but a reconstruction of the sentence heard, and therefore reflects cognitive competence. Children with ADHD did poorly on the sentence recall tasks because these represent rote, de-contextualized, non-meaningful activities and their performance limitations were more the result of problems these children have with distractibility/impulsivity than an internalized problem with working memory/language processing (Redmond, 2005).</td>
</tr>
<tr>
<td>Picture Completion Task</td>
<td>This task requires the child to view a picture with an important part missing and identifies the missing part. The task assesses visual perception and organization, concentration and visual recognition of essential details of objects.</td>
</tr>
<tr>
<td>Maze Game</td>
<td>Mazes assess inductive non-verbal reasoning skills and visual-motor speed with accuracy.</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>Mathematical problem-solving skills involve most of the cognitive processes like planning and to organize the correct steps to arrive at the solution and to implement the corresponding calculation procedures. Inattentive children seem to have a specific source of difficulty in problem solving when irrelevant information overloads the cognitive system. Students with ADHD may fail in some math problem-solving tasks because they do not attend to relevant stimuli and therefore do not build the conceptual knowledge needed for the task (Zentall et al., 1994).</td>
</tr>
<tr>
<td>Joining the dots</td>
<td>Children with attention problems tend to think in fragmented pieces rather than connecting all the dots. In this task the children will identify the details and patterns in images of dots. A dot-to-dot exercise helps the child to pay attention and enhance hand-eye co-ordination skills.</td>
</tr>
<tr>
<td>Visual-Spatial Sequential Reasoning Task</td>
<td>In this task one has to use logical reasoning skills to find the correct answer. This task requires manipulations among stimuli in order to reason, plan and problem solve using attentional, working memory and cognitive-perceptual skills.</td>
</tr>
<tr>
<td>Visual Memory Task</td>
<td>Children with ADHD do not process most information because of inattention (Bellgrove et al. 2006). They lose the opportunity to save and retrieve information and therefore experience memory impairment (Goldstein and Goldstein, 1998).</td>
</tr>
</tbody>
</table>
3.3.4.3 DETAIL SKETCH OF THE SESSION-WISE INTERVENTIONS CONDUCTED

Session 1 (Conducted with both parents and child)

<table>
<thead>
<tr>
<th>SPECIFIC GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To obtain consent from parent to undergo evaluation and therapy.</td>
</tr>
<tr>
<td>• Informing parents about the illness and its treatment.</td>
</tr>
</tbody>
</table>

GROUP A

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Baseline measurement.</td>
</tr>
<tr>
<td>• Psychoeducation on ADHD.</td>
</tr>
<tr>
<td>• Behavioural Case Formulation—(Antecedent-Behavioural-Consequence model).</td>
</tr>
</tbody>
</table>

GROUP B

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Focused on accepted/unaccepted emotional expressions - their relevance in life.</td>
</tr>
<tr>
<td>• Emotion-focused-behavioural case formulation.</td>
</tr>
</tbody>
</table>

PROCESS TO BE FOLLOWED AT HOME (By Parents)

- Attention enhancing games introduced. Asked to stop physical punishment.
- Parents were asked to maintain a weekly diary.

<table>
<thead>
<tr>
<th>DAYS</th>
<th>Write down all the good things your child did.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Difficulties Observed</td>
</tr>
</tbody>
</table>

- Asked to read the Handout.

HYPOTHETICAL OUTCOME

- Parents might get involved with the therapy.
- Use of games and fun tasks might increase positive interaction in the family.

HANDOUT:

GROUP A

- Having signs of ADHD

- "IT IS NOT MY FAULT"

- NO MORE PHYSICAL PUNISHMENT

- PRACTICING ATTENTION ENHANCING TASKS

- BE CONSISTENT

- WORK AS A TEAM

GROUP B

- Having signs of ADHD

- "IT IS NOT MY FAULT"

- LOOK AT MY STRENGTHS NOT WEAKNESSES

- NO MORE PHYSICAL PUNISHMENT

- PRACTICE ATTENTION TASKS

- BE CONSISTENT. WORK AS TEAM
ATTENTION GAMES

SESSION 1

ATTENTION GAMES

- Treat it as games not as tasks.
- Don’t evaluate Child’s performance.
- Appreciate for engaging and accepting the games.
- Encourage participation in the games.

INSTRUCTIONS:

DAY 1

- GAME 1: Colouring within lines.
- GAME 2: Cancel out single colour.

DAY 2

- GAME 1: Colouring within lines.
- GAME 2: Cancel out single and two colours simultaneously.
- GAME 3: Match the colours.

DAY 3

- GAME 1: Select 2 colours for each figure and fill it alternately.
- GAME 2: Cancel out single and two colours simultaneously.
- GAME 3: Match the colours.
- GAME 4: Copying the designs.

BEHAVIOUR DIARY:
Session 2  (Conducted with only parents)

<table>
<thead>
<tr>
<th>SPECIFIC GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focused on the need for changing parenting style.</td>
</tr>
</tbody>
</table>

**GROUP A**

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Review of the earlier session.</td>
</tr>
<tr>
<td>• Parents are encouraged not to see their parenting as failure rather a different parenting is required. Parents are assured that there will be good days and some not so good, this is normal.</td>
</tr>
<tr>
<td>• Use of Positive Reinforcement. “Catch the Good and Praise”</td>
</tr>
</tbody>
</table>

**GROUP B**

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “Catch the Good and Praise”</td>
</tr>
<tr>
<td>• Identify functional/dysfunctional transactional patterns.</td>
</tr>
<tr>
<td>• Clarified the boundaries of subsystems. Boundaries should be well-defined.</td>
</tr>
<tr>
<td>• Child’s awareness regarding positivity and negativity of emotions and their possible acceptance.</td>
</tr>
</tbody>
</table>

**PROCESS TO BE FOLLOWED AT HOME (By Parents)**

| • Start with small ‘praises’ immediately when the child does something good. |
| • Social/Material/Activity reinforcers. |
| • Attention enhancing games continued. Maintain weekly diary. Read the Handout. |

<table>
<thead>
<tr>
<th>HYPOTHETICAL OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents’ awareness regarding the child’s underlying skills and abilities</td>
</tr>
</tbody>
</table>

**HANOUT:**

**GROUP A**

- Having signs of ADHD is not my fault
- “Children with ADHD needs different PARENTING”
- Physical punishment
- Practice praising good behaviour
- Practice attention enhancing tasks

- BE CONSISTENT
- WORK AS A TEAM

**GROUP B**

- Having signs of ADHD is not my fault
- “Children with ADHD needs different PARENTING”
- Physical punishment
- Practice praising good behaviour
- Practice attention enhancing tasks

- BE CONSISTENT
- WORK AS A TEAM
SESSION 2

- Treat it as games not as tasks.
- Don’t evaluate Child’s performance.
- Appreciate for engaging and accepting the games.
- Encourage participation in the games.
- Remember this is his chance to win.

INSTRUCTION:

DAY 1

- **GAME 1**: Cancel out blue & red colours simultaneously.
- **GAME 2**: Fill the figures with 2 different colours but don’t cross the boundary line.
- **GAME 3**: Match the colours.
- **GAME 4**: Picture completion

DAY 2

- **GAME 1**: Fill the figures with 4 different colours but don’t cross the boundary.
- **GAME 2**: Match the shapes.
- **GAME 3**: Join-the-dots.
- **GAME 4**: Cancel out Number 3.
- **GAME 5**: Cutting pictures and sticking them.

DAY 3

- **GAME 1**: Select 2 colours for each figure and fill it alternately.
- **GAME 2**: Cancel out Number 3 and 5.
- **GAME 3**: Read the pairs. Then ask to recall the pairs.
- **GAME 4**: Match the colours with the name of the colours.
- **GAME 5**: Picture Completion.
SESSION 3
(Conducted with only parents)

**SPECIFIC GOALS**
LEARNING to **MODEL** the skill of listening

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of the earlier session. Includes: How did the parent tackle the difficult situations?</td>
<td></td>
</tr>
<tr>
<td>Make sure parents are working together.</td>
<td></td>
</tr>
<tr>
<td>Emphasized on ‘Parenting Similarity’. Stronger the parental alliance lesser will be the child-rearing disagreement.</td>
<td></td>
</tr>
<tr>
<td>Behaviour strategies to improve listening skills.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP B</th>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of previous week.</td>
<td></td>
</tr>
<tr>
<td>Use of positive affective words in communication patterns.</td>
<td></td>
</tr>
<tr>
<td>Discussed on the need for understanding child’s interpersonal world and attachment style.</td>
<td></td>
</tr>
<tr>
<td>Emphasized on ‘Parenting Similarity’.</td>
<td></td>
</tr>
<tr>
<td>Strategies to improve listening skills.</td>
<td></td>
</tr>
</tbody>
</table>

**PROCESS TO BE FOLLOWED AT HOME (By Parents)**
- Use of clear messages that are short. Make sure that your child is listening.
- To maintain eye-to-eye contact with the child.
- Try to repeat what he has said, and then give an answer. A sign of a supportive listener.
- Make it clear you are listening to what your child say. Show that you are willing to listen.
- Do not shout messages from room to room. Keep a proper distance.
- Continue praising for simple positive behaviour.
- Attention enhancing games continued. Maintain a weekly diary. Read the Handout.

**HYPOTHETICAL OUTCOME**
Parent a **MODEL** of a good listener. Child’s acceptance in the family gets enhanced.

**HANDOUT:**

**GROUP A**
- ‘Having signs of ADHD is not my fault’
  - Encourage the child to use eye contact.
  - Make sure that the child is listening.
  - Repeat what he has said after him, and then give an answer.
  - Make it clear that you are listening to what your child say.
  - Make sure you have eye-contact.
  - Do not shout messages from room to room.
  - May need to gently hold the child’s head to encourage eye contact.
  - Say “Look at me please”.

**GROUP B**
- ‘Having signs of ADHD is not my fault’
  - Encourage the child to use eye contact.
  - Make sure that the child is listening.
  - Repeat what he has said after him, and then give an answer.
  - Make it clear that you are listening to what your child say.
  - Make sure you have eye-contact.
  - Do not shout messages from room to room.
  - May need to gently hold the child’s head to encourage eye contact.
  - Say “Look at me please”.

**BE CONSISTENT**
PARENTS MUST WORK TOGETHER

<table>
<thead>
<tr>
<th>Physical punishment</th>
<th>Practice praising good behaviour</th>
<th>Improve listening skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SESSION 3

Instructions:

DAY 1
- GAME 1: Letter cancellation (Single letter).
- GAME 2: Copy the sentences.
- GAME 3: Cutting pictures and sticking them.
- GAME 5: Counting.

DAY 2
- GAME 1: Digit-symbol game.
- GAME 2: Compare the sizes.
- GAME 3: Copy designs.
- GAME 4: Describe the pictures.
- GAME 5: Writing of capital letters.

DAY 3
- GAME 1: Use story cards.
- GAME 3: Filling figure with colours.
- GAME 4: Writing of numbers serially.
- GAME 5: Writing of an alphabet preceding a specified alphabet.

DAY 4
- GAME 1: Number Cancellation.
- GAME 2: Writing of an alphabet succeeding a specified alphabet.
- GAME 3: Repeat sentences from memory.
- GAME 4: Reading of passages.
- GAME 5: Draw a picture of a person.
Session 4 (Conducted with both parents and child)

**SPECIFIC GOALS**

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td>To improve mother-child relationship.</td>
<td></td>
</tr>
<tr>
<td>Cultivation of positive emotions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Review and reflections on previous week – Discuss how the week has gone with the parents; what kind of difficulties they faced; going through the diaries.</td>
<td>• Review of previous week.</td>
</tr>
<tr>
<td>• Make sure parents are working together.</td>
<td>• Value of joint play emphasized.</td>
</tr>
<tr>
<td>• Therapist appreciates their efforts in bringing change to their parenting style.</td>
<td>• Focused on Play.</td>
</tr>
<tr>
<td>• Encourage mother to play with the child.</td>
<td>• Parents should develop trust that your child can learn, change, mature and succeed.</td>
</tr>
<tr>
<td></td>
<td>• Need to develop feeling of being understood and appreciated.</td>
</tr>
</tbody>
</table>

**PROCESS TO BE FOLLOWED AT HOME (By Parents)**

- Encourage good quality time. Play together.
- Play turn-taking games. Make your child to learn to win and lose.
- Child needs to know that they are loved and wanted.
- Encourage child to spend time in nature like playing in a park.
- Attention enhancing games continued. Maintain a weekly diary. Read the Handout.

**HYPOTHETICAL OUTCOME**

Changes in parent-child communication skills. Responses learned might transfer to similar situations (generalization)

**HANDOUT:**

**GROUP A**

**PLAY TOGETHER**

- Encourage good quality time
- Make your child learn to win and lose
- Teach your child to wait for his turn

**JOINT PLAY**

- Improve child’s ability to concentrate.
- Improves Family climate
- Releases tensions and pent-up emotions

**GROUP B**

**PLAY TOGETHER**

- Encourage good quality time
- Make your child learn to win and lose
- Teach your child to wait for his turn

**JOINT PLAY**

- Improve child’s ability to concentrate.
- Improves Family climate
- Releases tensions and pent-up emotions

**CHILD NEEDS TO KNOW THAT THEY ARE LOVED & WANTED.**

Child must be affectively involved
SESSION 4

INSTRUCTION:

DAY 1
- GAME 1: Cancellation of figures.
- GAME 2: Construction of sentences.
- GAME 3: Writing of small letters.
- GAME 4: Maze game.
- GAME 5: Cancellation of number.

DAY 2
- GAME 1: Digit-symbol game.
- GAME 2: Sequence games.
- GAME 3: Copy sentences.
- GAME 4: Construction of words with starting letter ‘B’ & ‘D’ (at least 5)
- GAME 5: Putting coins.

DAY 3
- GAME 1: Describe the pictures. Write few lines on it. (At least 2 lines).
- GAME 2: Solving problems.
- GAME 3: Counting.
- GAME 4: Writing of an alphabet preceding a specified alphabet.
- GAME 5: Draw

DAY 4
- GAME 1: Letter Cancellation.
- GAME 2: Reading of passage.
- GAME 3: Find hidden letters.
- GAME 4: Writing Expressions.
- GAME 5: Copying cursive writing.
### Session 5

<table>
<thead>
<tr>
<th>SPECIFIC GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction of punishment techniques to control behaviour. Emphasizing on social skills to reduce feeling of rejection from peers and family members.</td>
</tr>
</tbody>
</table>

#### GROUP A

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session conducted with Parents</strong></td>
</tr>
<tr>
<td>• Recap on progress and difficulties</td>
</tr>
<tr>
<td>• Steps to follow for introducing punishment techniques discussed.</td>
</tr>
<tr>
<td>✓ At first the child would need to understand which behaviour s/he should not do.</td>
</tr>
<tr>
<td>✓ Need to teach the child appropriate ways to show disagreement.</td>
</tr>
<tr>
<td>✓ Parents need to recognise that showing disagreement is a part of normal development; children are now learning to develop a sense of self.</td>
</tr>
<tr>
<td>✓ Use of punishment techniques means NOT causing the child to behave out of fear rather than respect.</td>
</tr>
<tr>
<td>✓ Punishment is needed in setting limits and rules at home.</td>
</tr>
</tbody>
</table>

#### GROUP B

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session conducted with both Parents and Child</strong></td>
</tr>
<tr>
<td>• Use of different punishment techniques.</td>
</tr>
<tr>
<td>• Ex.: Ignore, Time-out, Choices, and Withdrawal of rewards.</td>
</tr>
<tr>
<td>• Discussed on impact of peer and family.</td>
</tr>
<tr>
<td>• Discuss on factors provoking annoyance on the parts of peers and others.</td>
</tr>
<tr>
<td>• To develop new relationships. ‘play date’</td>
</tr>
<tr>
<td>• Parents were asked to pair the child with a less disruptive child and to arrange get-togethers with the two children. The main purpose is to teach parents on how to arrange get-togethers by minimizing conflict and enhancing positive engagement of the two children.</td>
</tr>
<tr>
<td>• Respecting child’s strength points.</td>
</tr>
</tbody>
</table>

#### PROCESS TO BE FOLLOWED AT HOME (By Parents)

| • Continue praising simple positive behaviour and joint play. |
| • Ignore undesirable behaviours. Give two choices only. |
| • Attention enhancing games continued. Maintain weekly diary. Read the Handout. |

#### HYPOTHETICAL OUTCOME

| Might help parents to manage child’s behaviour. Reduced social rejection. |
Inappropriate use of punishment may induce aggression and frustration in a child whereas, appropriate use modifies maladaptive behaviour.

**ATTENTION GAMES**

**SESSION 5**

**DAY 1**
- GAME 1: Maze game.
- GAME 2: Find the hidden words
- GAME 3: Mental control game.
- GAME 4: Jumbled words.
- GAME 5: Word recall.

**DAY 2**
- GAME 1: Visual Discrimination game.
- GAME 2: Verbal language expression games.
- GAME 3: Writing skills.
- GAME 4: Reading.
- GAME 5: Repeat sentences.

**DAY 3**
- GAME 1: Describe the pictures. Write few lines on it. (At least 2 lines).
- GAME 2: Join the dots.
- GAME 3: Digit span
- GAME 4: Unfinished story.
- GAME 5: Draw.
Session 6

**SPECIFIC GOAL**

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS FOLLOWED AT SESSION</strong></td>
<td><strong>PROCESS FOLLOWED AT SESSION</strong></td>
</tr>
</tbody>
</table>
| Session conducted with Parents.  
  • Review and reflections on previous week.  
  • Provide routines and structure.  
  • Participate in joint play contingent on task completion. Encourage the child to finish tasks.  
  • Break complex task into smaller pieces  
  • Strategies to decrease distractions.  
  • Reward for small achievement. Earshotting.  
  Earshotting is a good reinforcer for the child to talk about his positive deeds to a friend or relative on the phone, when the child is in earshot. | Session conducted with both Parents and Child  
  • Discuss on change of relationship bond by parents.  
  • Summary of changes that the family has made to improve communication patterns.  
  • Deemphasizing & relabeling the symptom.  
  • Help the child to express feelings appropriately.  
  • Provide a structured routine.  
  • Strategies to decrease distractions.  
  • Break complex task into smaller pieces.  
  • Reward the child for small achievement. |

**PROCESS TO BE FOLLOWED AT HOME (By Parents)**

- Provide routine.  
  ✓ Need to plan ahead.  
  ✓ Do not tell the child about events that are happening many weeks in advance.  
  ✓ Break complex task into simple achievable tasks.  
- Give the child time to prepare to finish their task. Use Warning/countdowns.  
- After completion of the task, play together. Don’t evaluate or compete.  
  ✓ Let the child choose what he/she wants to play.  
  ✓ Pace the play at child’s developmental level.  
  ✓ Don’t criticize or direct him/her what to play.  
  ✓ Laugh and have fun.  
  ✓ Tell the child that you have enjoyed time with him/her.  
- Selected attention improving daily activities. Practice weekly diary. Read the Handout.

**HYPOTHETICAL OUTCOME**

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enhance time management skills and academic interest.</strong></td>
<td></td>
</tr>
</tbody>
</table>
HANDOUT:

**GROUP A**

- Encourage joint play.
- Practice praising good behaviour in different settings.
- Use appropriate punishment techniques.
- Give the child time to prepare to finish their task.
- Using warning / countdowns.
- Provide a structured routine.

Break complex task into simple achievable tasks

Set Time Limit

The child must finish the task

Use warnings/countdowns

Praise for good behaviour

**GROUP B**

Change Parent-Child relationship bond

Create positive affect in the relationship

Break complex task into simple achievable tasks

Set Time Limit

The child must finish the task

Use warnings/countdowns

Praise for good behaviour

---

**ATTENTION GAMES**

**SESSION 6**

**DAY 1**

- **GAME 1:** Drawing.
- **GAME 2:** Solving problems.
- **GAME 3:** Sorts out vegetables and places them in respective container / in a fridge.
- **GAME 4:** Carries water in a small bucket / from the tap.

**DAY 2**

- **GAME 1:** Digit-symbol game.
- **GAME 2:** Separate leaves in the leafy vegetables.
- **GAME 3:** Wipes glasses & plates with a cloth after washing.
- **GAME 4:** Sets time in watch.

**DAY 3**

- **GAME 1:** Copies a paragraph (5-6 sentences) with punctuation.
- **GAME 2:** Reads sign boards.
- **GAME 3:** Serves water to others.
- **GAME 4:** Folds small clothes (such as hand towel).

**DAY 4**

- **GAME 1:** Washes glasses and plates before and after meals.
- **GAME 2:** Makes flower garlands using thread and needle.
- **GAME 3:** Makes bed for sleeping.
- **GAME 4:** Involves in plant care and gardening.
Session 7

(Session conducted with both Parents and Child)

<table>
<thead>
<tr>
<th>SPECIFIC GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>To increase the likelihood of acceptable behaviour by using tokens (stars) as secondary reinforcers.</td>
</tr>
</tbody>
</table>

GROUP A

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Introduction of Tokens Economy.</td>
</tr>
<tr>
<td>- Steps followed to implement Token Economy:</td>
</tr>
<tr>
<td>- Identify the Target Behaviour.</td>
</tr>
<tr>
<td>- Selection of Reinforcers</td>
</tr>
<tr>
<td>- Define Tokens &amp; how they are allocated.</td>
</tr>
<tr>
<td>- Select Backup Reinforcer.</td>
</tr>
<tr>
<td>- Decide how many tokens are needed to get rewards.</td>
</tr>
<tr>
<td>- Provide the tokens as soon as it is earned.</td>
</tr>
</tbody>
</table>

GROUP B

<table>
<thead>
<tr>
<th>PROCESS FOLLOWED AT SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Review and reflections on previous week.</td>
</tr>
<tr>
<td>- His awareness regarding his improvements if any. If not, his strengths, limitations and relationship significance must be discussed once.</td>
</tr>
<tr>
<td>- Introduction of Token Economy.</td>
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<table>
<thead>
<tr>
<th>PROCESS TO BE FOLLOWED AT HOME (By Parents)</th>
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</thead>
<tbody>
<tr>
<td>- Play together; provide routine.</td>
</tr>
<tr>
<td>- Use of tokens to increase desirable behaviour and delay gratification.</td>
</tr>
<tr>
<td>- Attention enhancing daily activities continued.</td>
</tr>
<tr>
<td>- Asked to maintain a weekly diary; read the Handout.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HYPOTHETICAL OUTCOME</th>
</tr>
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<tbody>
<tr>
<td>Token economy might help in maximizing acceptable behaviour.</td>
</tr>
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</table>
**ATTENTION GAMES**

**SESSION 7**

**DAY 1**
- **GAME 1:** Plays make believe games pretending to be teacher, mummy, daddy or elder sibling going to school/household keeping.
- **GAME 2:** Groups objects according to the size (big & small; long & short).
- **GAME 3** Cleans his own tiffin box, plate, glass and spoon after eating.

**DAY 2**
- **GAME 1:** Draw
- **GAME 2:** Arranges bouquets with natural/artificial flowers.
- **GAME 3:** Clean utensils with washing powder or liquid soap.

**DAY 3**
- **GAME 1:** Irons his own clothes.
- **GAME 2:** Carries water in a small bucket/ from the tap.
- **GAME 3:** Putting coins/buttons in slots.
Session 8

**SPECIFIC GOAL**
To encourage parents to become their child’s trainer.

**GROUP A**

**PROCESS FOLLOWED AT SESSION**
Session conducted with Parents (No Child)
- Recap on progress and difficulties.
- Encourage parents to find their own solutions to difficult behaviour.
- Identify triggers for difficult behaviour.
- Tokens are earned for particular behaviour; tokens can also be withdrawn.
- Praise the mother. “You will become your child’s trainer”.

**GROUP B**

**PROCESS FOLLOWED AT SESSION**
Session conducted with Parents & Child
- The therapist and client must keep in mind that the therapy is designed to teach the parent and the child some skills with which he or she can continue to build new relationships and to relieve his or her acute distress and thereby not exact ‘cure’.
- Find a sport that the child will enjoy and that suits his or her strengths.

**PROCESS TO BE FOLLOWED AT HOME (By Parents)**
- Earshotting: Attention enhancing daily activities continued.
- Asked to maintain a weekly diary; read the Handout.

**HYPOTHETICAL OUTCOME**
Increased in self-acceptance, positive self-image.
SESSION 8

DAY 1

- **GAME 1:** Sorts out vegetables and places them in respective container /in a fridge
- **GAME 2:** Separate leaves in the leafy vegetables.
- **GAME 3:** Filling water bottle.

DAY 2

- **GAME 1:** Drawing.
- **GAME 2:** Involves in plant care and gardening.
- **GAME 3:** Makes bed for sleeping.
Session 9 (Session conducted with both Parents and Child)

<table>
<thead>
<tr>
<th>SPECIFIC GOAL</th>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td>To recapitulate the learned principles.</td>
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</tbody>
</table>

**GROUP A**

**PROCESS FOLLOWED AT SESSION**
- Review of earlier sessions.
- Highlight positive interactions between mother and child. Remind parents to try out strategies outside home.
- Remind parents that next week is last session. Encourage to make a list of issues to discuss.
- Record positive and negative incidents in the homework diary.
- Review handout.

**GROUP B**

**PROCESS FOLLOWED AT SESSION**
- What are the future aspirations? How he thinks he will reach his desire targets?
- Which corners of the family are enjoyable now and which corners are yet to recover.
- Provide detail information about how each member contributes to relationship functioning.
- Re-establish an ongoing positive, caring atmosphere.

**PROCESS TO BE FOLLOWED AT HOME (By Parents)**
- Attention enhancing activities continued. Continue joint play.
- Asked to maintain a weekly diary. Read the Handout.

**HYPOTHETICAL OUTCOME**
Positive family climate. Acceptance of both strengths and deficits.

**HANDOUT:**

**GROUP A**
- **ENJOY GOOD QUALITY TIME.**
- **CONTINUE JOINT PLAY.**
- **CONTINUE PRAISING SIMPLE POSITIVE BEHAVIOUR.**
- **TRY OUT THE STRATEGIES OUTSIDE THE HOME.**

**GROUP B**
- **ENJOY GOOD QUALITY TIME.**
- **CONTINUE JOINT PLAY.**
- **CONTINUE PRAISING SIMPLE POSITIVE BEHAVIOUR.**
- **TRY OUT THE STRATEGIES OUTSIDE THE HOME.**

**ATTENTION GAMES**

**DAY 1**
**GAME 1:** Serve water to others.
**GAME 2:** Iron own clothes.
**GAME 3:** Arrange school bag.

**DAY 2**
**GAME 1:** Cover exercise book.
**GAME 2:** Filling water bottle.
**GAME 3:** Plays make believe games pretending to be teacher, mummy, daddy or elder sibling going to school/household keeping.
Session 10 (Session conducted with both Parents and Child)

**GROUP A**

**PROCESS FOLLOWED AT SESSION**
- Review programme progress.
- Sharing of experiences in the therapeutic process.
- Discuss what the mother understands about the strategies. What changes has she made already and what she thinks need to change further.
- What changes she finds in her child?
- Remind changes do not occur overnight.
- Need to be consistent and persistent.
- Work together.
- Anticipate difficult times in the future.
- Looking after you in times of stress.
- Viewing difficult situations objectively.
- Read the handouts.

**HANDOUT:**

- **GROUP A**
  - Having signs of ADHD is not my fault.
  - Encourage joint play.
  - Practice praising good behaviour in different settings.
  - Use appropriate punishment techniques.
  - Give the child time to prepare to finish their task.
  - Structuring of academic work is requiring.
  - Set short-term goals.
  - Break long assignments into smaller parts.
  - Use token economy.
  - May require ‘limit setting’.
  - Try out the strategies outside the home.
  - Changes do not occur overnight.
  - Need to be consistent and persistent.
  - Work together.
  - “You will become your child’s trainer”.

- **GROUP B**
  - Having signs of ADHD is not my fault.
  - Encourage joint play.
  - Practice praising good behaviour in different settings.
  - Use appropriate punishment techniques.
  - Structuring of academic work is required.
  - Set short-term goals.
  - Use token economy.
  - Try out the strategies outside the home.
  - Changes do not occur overnight.
  - Need to be consistent and persistent.
  - Work together.
  - “You will become your child’s trainer”.

Post-Intervention Assessment done
3.3.5 METHODS OF ANALYSES

Data for each of the questionnaires were scored following the respective scoring schedule. Data were entered into the Statistical Package for Social Sciences (SPSS) version 16.0 for quantitative analyses that are presented in the chapter entitled “Results”.

Descriptive statistics (Mean±SD, frequencies) were used for studying the sample characteristics. For both the groups initially before introducing the intervention process, baseline assessment was done. After the completion of last session, post-intervention measures were conducted. In order to assess the pre and post-treatment change, within-group repeated measure analyses (Wilcoxon-Signed Rank Test) and Mann-Whitney U-test between the groups was conducted.

To address the main research questions and hypotheses, ipsative scores was computed. Ipsative scores were calculated by subtracting the post-intervention scores from the test results of pre-intervention scores. Ipsative scores represent pre-to-post treatment change. In order to measure the efficacy of the two interventions, ipsative scores of the two groups were statistically compared using Mann-Whitney-U tests. All statistical tests were two-tailed, and alpha level was set at .05.