EFFECT OF BRAHMIGHRITHA AND COUNSELLING THERAPY ON DISOBEDIENCE IN CHILDREN WITH CONDUCT DISORDER – A CLINICAL STUDY

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ABSTRACT
Childhood behaviour and emotional problems with their related disorders have significant negative impacts on the individual, the family and the society. Behavioral noncompliance, also known as defiance or disobedience, refers to those instances when a child either actively or passively, but purposefully, does not perform a behavior that has been requested by a parent or other adult authority figure (eg, a teacher or school bus driver). Children who are persistently noncompliant are given intervention and monitored for evaluating the effectiveness of the intervention. Most treatments designed to reduce noncompliant behavior in children have focused on teaching parents’ specific ways to interact with, and consequently alter, the behavior of their child. Brahmighrita is a polyherbal Ayurveda formulation that is widely used in the management of psychiatric disorders. Here, a study was conducted with the objective of evaluating the combined effect of Brahmighritha and counselling therapy on disobedience in children diagnosed with conduct disorder. A prospective clinical trial to evaluate the combined effect of Brahmighritha and counselling therapy on disobedience in children diagnosed with conduct disorder was conducted at Vaidyaratnam PS Ayurveda College Hospital, Kottakkal. The study design was non-randomised, pre and post-test study and selected 30participants were administered Brahmighritha and counselling therapy for 30days and assessment was done. Results obtained show that effects tested using F test P Value of 0.000 was obtained showing that symptoms of disobedience significantly changed due to the treatment. The intervention showed significant difference between before treatment and after treatment (after the first assessment) as given by the p value of 0.014. Hence, it is concluded that in this study the combined effect of Brahmighrita and counselling therapy on disobedience in children diagnosed with conduct disorder is found statistically significant. It is recommended that a long-term study may be done to find out the extent of effect as in this study follow-up was done only up to 45days.

Keywords: Brahmighritha, counselling therapy, Child disobedience, Conduct Disorder

INTRODUCTION
Childhood behaviour and emotional problems with their related disorders have significant negative impacts on the individual, the family and the society\(^1\). Practitioners and researchers regard Child disobedience and noncompliance as key elements of child and adolescent problem behaviour. The terms noncompliance and disobedience are usually used interchangeably. Noncompliance is a broader term that can include children’s ignoring of parental commands or wishes\(^2\). The diagnosis largely depends on the clinical skills of an integrated collaboration of multiple professional experts as there is no single gold-standard diagnostic tool available. Diagnosis relies on interpretation of subjective multi-source feedback from parents or carers, teachers, peers, professional or other observers provided through several psychometric questionnaires or screening tools\(^1\).

Deivasigamani had reported the prevalence of Conduct Disorder to be 11.13%, Sarkar et al. reported the prevalence rate of antisocial behaviour to be 7.1% while recently Srinath et al. have reported a prevalence as low as 0.2%\(^3\). Behavioral noncompliance, also known as defiance or disobedience, refers to those instances when a child either actively or passively, but purposefully, does not perform a behavior that has been requested by a parent or other adult authority figure (e.g., a teacher or school bus driver)\(^2\). The term defiance is described as “negativism for its own sake” and refers to overt behaviors such as temper tantrums and whining in response to parental requests\(^4\).

Children who are persistently noncompliant are given intervention and monitored for evaluating the effectiveness of the intervention. Most treatments designed to reduce noncompliant behavior in children have focused on teaching parents’ specific ways to interact with, and consequently alter, the behavior of their child\(^2\). This has become more and more relevant in the Indian social set up, as the urban and sub-urban society has mostly transformed in to the nuclear family structure. Support and care are found wanting in many cases where such families are involved. Hence, it could be understood that counselling therapy has immense contribution in correcting behavioural problems.

Description of abnormal behavior are found scattered in Ayurveda texts like Heenasatva, Anavasthitaa-Chittatva, Mano-vibhraam, Budhi-vibhraam, Smriti-vibhraam, Sheela-vibhraam, Cheshta-vibhraam, Achara-vibhraam etc. Ayurveda considers imbalance of sareera and mano-dosha in response to different etiological factors or associated to any illness in personalities with heenasatva leading to the above states as the pathogenesis of conduct disorders in general.\(^5\)

Thereby the samprapti constructed warrants a treatment approach in which snehana, especially, ghritapaana is important.

Brahmighritha\(^6\) is a polyherbal Ayurveda formulation that is widely used in the management of psychiatric disorders. Multiple clinical and experimental studies have been conducted on Brahmgiritha which has shown its results in improved learning and memory, anticonvulsant action, CNS depressant activity, antiamnestic actions, antinociceptive action, its effect on depression and in ADHD children and many are on its neurocognitive actions\(^7\).

**Objective**

Here, a study was conducted with the objective of evaluating the combined effect of Brahmgiritha and counselling therapy on disobedience in children diagnosed with conduct disorder.

**Materials and methods**

A prospective clinical trial to evaluate the combined effect of Brahmgiritha and counselling therapy on disobedience in children diagnosed with conduct disorder was conducted at Vaidyaratnam PS Ayurveda College Hospital, Kottakkal. Ethical clearance was obtained prior to the study (IEC/Doc/25/2017 dt.21/04/2017).

**Materials**

Case record form: Brahmgiritha

ingredients: *Brahmi Swarasa* (Bacopa monnieri), *Ghrita* (Cow’s ghee), *Trikatu* [Sunthi (Zingiber officinalis)], Pippali (Piper longum), Maricha (Piper nigrum)], *Trivrut* (Operculina terpenthum), *Shankhpushpi* (Convulvulus pluricaulis), *Sapthala* (Ophiorrhiza mungos), *Vidanga* (Embelia ribes)
This medicine prepared as per AFI guidelines was purchased from a GMP certified company.

- ICD 10 criteria for conduct disorders (F91)
- Informed Consent Form
- Participant Information Sheet
- Conduct disorder scale (CDS) (6-12years)

**Methods**

**Study design** - Non-randomised, pre and post-test study

**Setting** - Manassanthi Clinic of Vaidyaratnam PS Varier Ayurveda College Hospital Outpatient department

**Sampling** - Non-randomised

**Sample size** - 30

**Diagnostic criteria** - ICD 10 criteria for conduct disorders (F91)

**Inclusion criteria** - Satisfying diagnostic criteria, Given Informed Consent from parents, Age 6-12years, No discrimination of age, gender and economic status

**Exclusion criteria** - Epilepsy, Obsessive compulsive disorder, Schizophrenia, Congenital abnormalities, Organic disorders, Mental insufficiency. Validated structured counselling method was followed in the intervention.

**Plan of study**

The selected participants were administered *Brahmighritha* for thirty days along with *counselling therapy* and assessment was done pre and post study.

**Dose of *Brahmighritha***: was fixed according to the age

**Time of administration**: 6AM & 6PM

**Duration**: 1month

**Assessment criteria**: Conduct disorder scale (CDS) (6-12years)

**Data collection and analysis**

Data was collected and recorded in the Case record form on 0, 15, 30 and 45th days of study. Statistical analysis was performed using SPSS 16.0 version and repeated measure anova test and Pair-wise Comparisons test were used to find out the effect.

**Results and Analysis**

**Effect of therapy on disobedience** within participants:

Table 1: showing the symptoms of disobedience by repeated measure anova

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sphericity Assumed</td>
<td>7.489</td>
<td>2</td>
<td>3.744</td>
<td>12.643</td>
<td>0.000</td>
</tr>
<tr>
<td>Greenhouse-Geisser</td>
<td>7.489</td>
<td>1.781</td>
<td>4.205</td>
<td>12.643</td>
<td>0.000</td>
</tr>
<tr>
<td>Huynh-Feldt</td>
<td>7.489</td>
<td>1.889</td>
<td>3.964</td>
<td>12.643</td>
<td>0.000</td>
</tr>
<tr>
<td>Lower-bound</td>
<td>7.489</td>
<td>1.000</td>
<td>7.489</td>
<td>12.643</td>
<td>0.001</td>
</tr>
</tbody>
</table>

The assumption of Sphericity was assumed due to the P value greater than 0.05 in Mauchly’s test.

Within participants, effects tested using F test P Value of 0.000 was obtained showing that symptoms of disobedience significantly changed due to the treatment.

Table 2: Effect of therapy by Pair-wise Comparisons:

<table>
<thead>
<tr>
<th>(I)</th>
<th>(J)</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0.433</td>
<td>0.141</td>
<td>0.014</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>0.700</td>
<td>0.160</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>0.267</td>
<td>0.117</td>
<td>0.090</td>
</tr>
</tbody>
</table>

On pair-wise comparisons between the assessments, the intervention showed significant difference between before treatment and after treatment (after the first assessment) as given by the p value of 0.014. The intervention significantly changed the symptom after the follow up given by a p value of 0.000. There
was no significant difference in the symptom assessment after the treatment and the follow-up (p = 0.090).

**DISCUSSION**

Ghrita has madhura rasa which is saptadhatus vardhaka, indriyaa prasadaka, rasayana, smriti buddhi agni shukra oja vardhaka etc. By applying the theory of similarity, it can be said Mastishka (brain) which resembles molten ghee can be supplemented with clarified butter in various therapies. Go-ghrita has a striking efficacy in crossing BBB (Blood Brain Barrier) which is very much needed for treating mental anomalies. Studies have observed the effect of Brahmi ghrita on emotional quotient as reported by Prabhakar et al., thereby have suggested possible influence of ghrita on limbic system.

Counselling Therapy acts as a supportive therapy to Ghriitha-paana and Ayurveda practitioners dealing with conduct disorders have been incorporating Counselling therapy in the management of many psychiatric and psycho-somatic disorders. These counselling programs have shown to be effective at reducing child behavior problems including noncompliance within the first 3 years after treatment, with one study reducing noncompliance from a baseline of 65% to 15% after treatment.

Although this study and other programs aimed at reducing disobedience in children have demonstrated effectiveness, there has been a paucity of follow-up studies that have documented the long-term effects of these interventions.

**CONCLUSION**

Hence, it is concluded that in this study the combined effect of Brahmi ghrita and counselling therapy on disobedience in children diagnosed with conduct disorder is found statistically significant. It is recommended that a long-term study may be done to find out the extent of effect as in this study follow-up was done only up to 45days. The current understanding of the conduct disorder affected individual and the society implies that a holistic approach including counselling therapy chiefly is of prime importance.

**REFERENCES**

2. Larry M. Kalb, BA*, and Rolf Loeber, PhD. Child Disobedience and Noncompliance: A Review. PEDIATRICS (ISSN 0031 4005) March 2003; Vol. 111 No. 3: 641-52

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