

A Randomized Single Blind Placebo Controlled Study to Evaluate the Efficacy of “Gingko Biloba 200C” in Improving Academic Skills in Poorly Performing Lower Secondary High School Students Aged 11-16 Years Using Academic Performance Rating Scale [APRS]

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ABSTRACT

Academic performance is essential for the successful development of young people in society. Academically successful students have a higher chance of succeeding in their careers and finances as adults. Memory, Comprehension & Attention play crucial role in academic performance. Numerous remedies, including Anacardium, Baryta Carb, Clac Carb, Lycopodium, Phosphorus, Phosphoric Acid, Tuberculinum, and others, are suggested in homeopathic literature to enhance memory, comprehension, and attention. These medicines, in turn, aid in enhancing academic performance. Gingko Biloba is a lesser-known remedy for weak memory, dullness of mind. This project aimed to assess the efficacy of Ginkgo Biloba in enhancing student's memory and concentration, thereby enhancing their academic performance.

KEY WORDS: Ginkgo Biloba, Academic performance, Homoeopathy

INTRODUCTION

Academic Performance has been defined as grade point average, standardized test scores and educational aspirations and attainment. It focuses on how students accomplish their responsibilities and studies. Academic Skills are required to participate in educational course now and in the future. These skills include time management, note-taking, research, writing, reading comprehension, and critical thinking.

Upper and Lower Secondary Education are the two stages which constitute up Secondary Education. According to International Standard Classification of Education (ISCED) Lower secondary education is the first stage of secondary education building on primary education, typically with a more subject orientated curriculum. Lower Secondary Education is often called Middle School and is one of phase on the international standard classification of educational scale. This portion of Secondary Education is often providing a bridge between early primary education and secondary education.

Education is crucial for children aged 11-16 in lower secondary high school as it helps

them think abstractly, develop problem-solving strategies, analyze information and evaluate arguments, become more self-aware of their thoughts, feelings, and motivation, and recognizes the significant impact of social influences on their behavior and decision-making.

According to Homoeopathic Literature, Murphy's textbook of Homoeopathic Materia Medica, "Ginkgo Biloba" has remarkable action in improving academic skills, in dullness of mind in students, but little is known about its effectiveness as it is a less proven remedy. This study thoroughly evaluates Ginkgo Biloba in relation to evidence-based homeopathic treatments for improving mental dullness, forgetfulness, and absentmindedness.

GINGKO BILOBA: Ginkgo Biloba, also known as Maidenhair Tree, belongs to the Taxaceae family, tincture prepared from fresh spring leaves. Its action includes mental weakness, exhausted, sensation of mental fatigue, and mental work in an effort to carry out, poor concentration, loss of memory, inability to solve mental tasks and Alzheimer's disease. It has action on Cognitive Enhancing Improving memory, Cognition, Attention, Cerebral Insufficiency, Memory, Headache, Anxiety and Depression.

AIM OF THE STUDY:

To study the action of ginkgo biloba in improving the academic skills in poorly performing students.

OBJECTIVE:

1. To identify consistently poor performing students aged 11-16 years in academics at lower secondary high school.
2. To determine the effectiveness of homoeopathic intervention "GINGKO BILOBA 200C" in improving academic skills of poorly performing students through academic performance rating scale.

HYPOTHESIS:

Research Hypothesis: Ginkgo biloba is effective in improving academic skills in poorly performing lower secondary high school student.

Null Hypothesis: Ginkgo Biloba is not effective in improving academic skills in poorly performing lower secondary high school students.

MATERIALS AND METHODS:

Source of the data: The study is conducted in the OPD, MNR School, Sangareddy, Telangana.

Type of study: Experimental study

Sample size: 20 Patients

SELECTION CRITERIA:

Inclusion criteria:

1. School students age between 11-16 years are included in this study Both male and female students.
2. Students who are poor in academic performances, due to poor memory and concentration, forgetfulness, unable to perform in exams due to emotional upsets like stress and nervous anxiety.

Exclusion criteria:

1. Students who are known to be suffering from Neuro developmental disorders like ADHD, Autism spectrum disorders, Mental retardation, cerebral palsy & chronic psychiatric illness like Anxiety, Depression, Bipolar disorder, schizophrenia, PTSD and who are under medication.
2. Students suffering with chronic systemic illness like hypothyroidism, hyperthyroidism, epilepsy, and who are under such medication, which severely interfere with cognition abilities.
3. Students and their parents who are not ready to give consent.

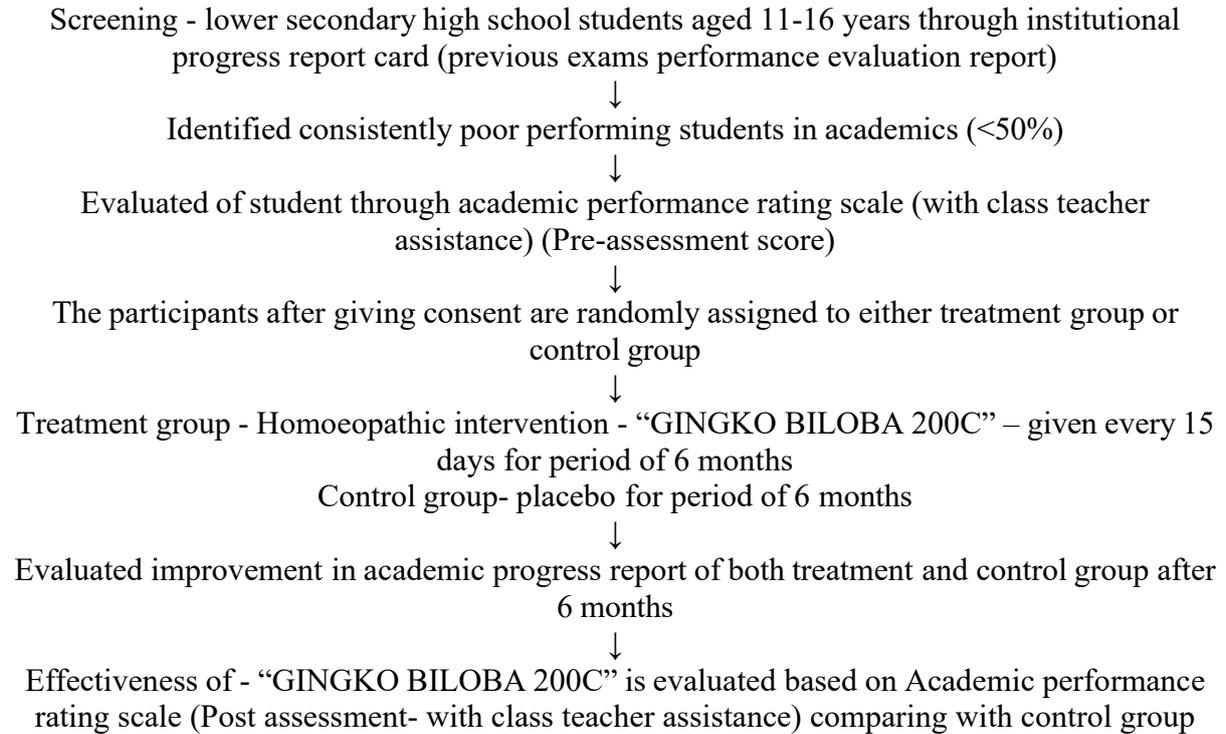
METHODOLOGY

Data collection: A standard case proforma is maintained for obtaining the patients details and the same is used to record them. All the

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recorded details of the patients kept confidential. committee and informed consent form was obtained from the patient.
 Ethical Considerations: Ethical clearance was taken from the institutional ethical

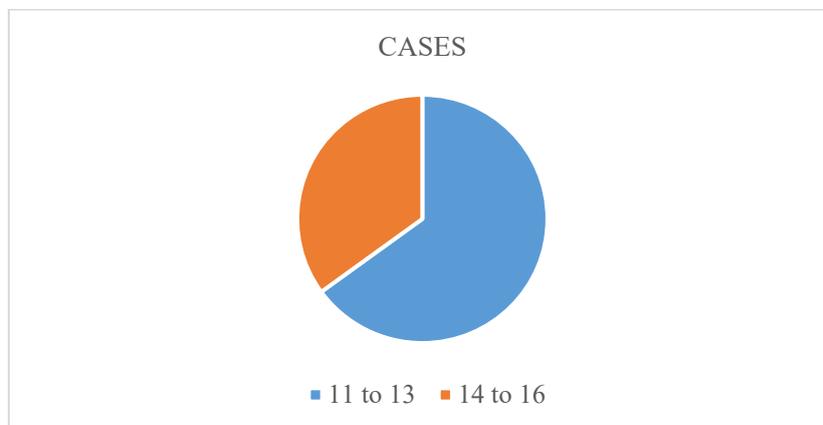
METHOD OF RESEARCH



OBSERVATIONS AND RESULTS

1. Showing distribution of case in relation to different age group

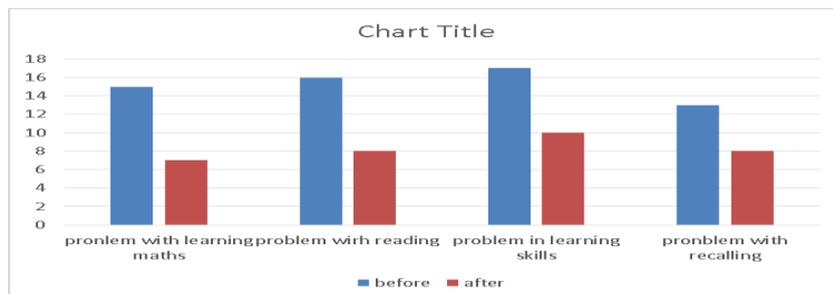
| S. No. | Age Group | Cases |
|--------|-----------|-------|
| 1. | 11-13 | 13 |
| 2. | 14-16 | 7 |
| | Total | 20 |



2. Improvement according to symptoms:

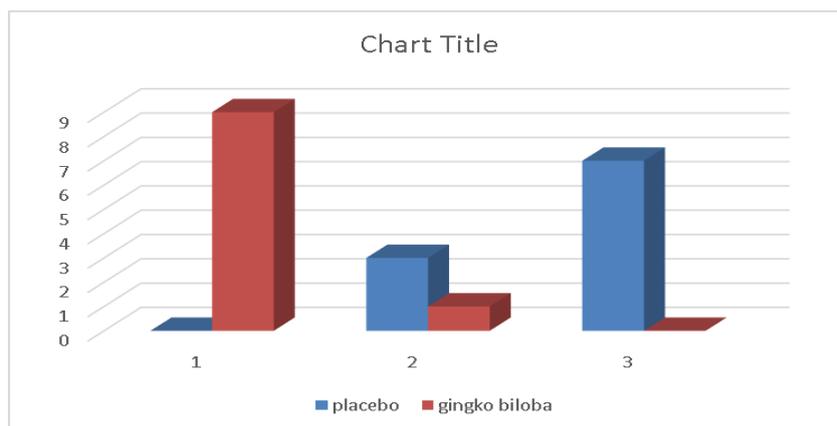
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| S No | Symptoms | before | after |
|------|-----------------------------|--------|-------|
| 1 | problem with learning maths | 15 | 7 |
| 2 | problem with reading | 16 | 8 |
| 3 | problem in learning skills | 17 | 10 |
| 4 | problem with recalling | 13 | 8 |



3. Table and Diagrammatic representation showing improvement using APRS:

| Prognosis | Control Group | Medicine Group |
|-----------------------------|---------------|----------------|
| No. of improvement | 0 | 7 |
| No. of moderate improvement | 1 | 3 |
| No improvement | 9 | 0 |



STATISTICAL ANALYSIS:

Unpaired t test results:

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria, this difference is considered to be extremely statistically significant. Confidence interval:

The mean of Group One minus Group Two equals -1.60

95% confidence interval of this difference:

From -1.98 to -1.22 Intermediate values used in calculations:

$t = 8.7636$

$df = 18$

Standard error of difference = 0.183

REVIEW DATA:

| Group | Group One | Group Two |
|-------|-----------|-----------|
| Mean | 0.10 | 1.70 |
| SD | 0.32 | 0.48 |
| SEM | 0.10 | 0.15 |
| N | 10 | 10 |

DISCUSSION AND CONCLUSION

20 cases were considered and GINGKO BILOBA was prescribed to 10 cases, and other 10 placebo. The effectiveness of the remedy was analyzed using APRS. Results show 65% cases have improved where as 35% cases not improved. Symptom wise improvement also seen in remedy group.

Statistical analysis was done by using unpaired T Test, which showed 2 tailed P Value is less than 0/0001, which is extremely significant. Hence GINGKO BILOBA is effective in improving academic skills in poorly performing students. Further studies are needed to confirm its effectiveness as the study group is small.

Declaration by Authors

Ethical Approval: Approved

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Conflict of Interest: No conflicts of interest declared.

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