

A Comparative Study to Evaluate the Effectiveness of Sabal serrulata and Alfalfa Mother Tinctures in Individuals with Low Body Mass Index Aged 18–25 Years

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Abstract—Background Low body mass index (BMI) among young adults is a common nutritional concern associated with poor appetite, generalized weakness, fatigue, reduced physical performance, nutritional deficiencies, and impaired quality of life. In homoeopathic practice, Sabal serrulata and Alfalfa mother tinctures are frequently prescribed to improve appetite, nutrition, and general health. [8,18] However, comparative clinical evidence regarding their effectiveness in underweight young adults is limited.

Objective

To compare the effectiveness of Sabal serrulata and Alfalfa mother tinctures on BMI, appetite, and general well-being in underweight individuals aged 18–25 years.

Materials and Methods

A comparative clinical study was conducted among forty-five underweight participants (BMI <18.5 kg/m²) aged 18–25 years. Participants were allocated into three groups of fifteen each. Group A received Sabal serrulata mother tincture (10 drops daily), Group B received Alfalfa mother tincture (10 drops daily), and Group C followed dietary advice without homoeopathic medication. Treatment was continued for ninety days with follow-up every fifteen days. BMI was calculated using measured height and weight at baseline and during follow-up. Clinical improvement in appetite, weakness, fatigue, and general well-being was also recorded.

Results

Thirty participants completed the study, while fifteen were lost to follow-up. Improvement was observed in three participants receiving Sabal serrulata, six receiving Alfalfa, and two following dietary advice alone. Participants treated with Alfalfa demonstrated comparatively greater improvement in BMI and associated clinical symptoms than those in the other

groups. Improvements in appetite, weakness, fatigue, and selected associated complaints were also noted.

Conclusion

Both Sabal serrulata and Alfalfa mother tinctures demonstrated improvement in some underweight young adults during the study period. Alfalfa showed comparatively better clinical outcomes than Sabal serrulata and dietary advice alone. Larger, well-designed controlled clinical studies are required to confirm these findings.

Index Terms—Low BMI, Underweight, Sabal serrulata, Alfalfa, Mother Tincture, Homoeopathy, Young Adults.

I. INTRODUCTION

Body mass index (BMI) is a widely accepted anthropometric indicator used to evaluate nutritional status by relating body weight to height. [3] Adults with a BMI below 18.5 kg/m² are classified as underweight and may experience adverse health outcomes including malnutrition, anaemia, fatigue, impaired immunity, osteoporosis, reduced physical capacity, and poor quality of life. Young adulthood represents a critical period of physical and metabolic development, making adequate nutrition essential for maintaining long-term health [1,2,6,9]

The prevalence of underweight remains an important public health concern in developing countries, including India. [5,6,19] Irregular dietary habits, increased academic stress, inadequate calorie intake, socioeconomic factors, chronic illness, and psychological disorders contribute significantly to low

BMI among young adults^[7] Persistent undernutrition may impair academic performance, physical endurance, reproductive health, and immune function. Conventional management of underweight primarily focuses on nutritional counselling, calorie-rich balanced diets, lifestyle modification, and treatment of underlying diseases. Despite these measures, many individuals continue to experience poor appetite and difficulty gaining weight. Consequently, complementary approaches such as homoeopathy are frequently sought.

Within homoeopathic Materia Medica, Alfalfa (*Medicago sativa*) is traditionally indicated for loss of appetite, weakness, emaciation, nutritional deficiency, and general debility. It is believed to improve digestion, nutrient assimilation, and appetite, thereby supporting healthy weight gain.

II. MATERIALS AND METHODS

Study Design

A comparative, three-arm clinical study was conducted to evaluate and compare the effectiveness of Sabal serrulata mother tincture and Alfalfa mother tincture in improving Body Mass Index (BMI) among underweight young adults aged 18–25 years. The study was carried out over a period of 90 days with scheduled follow-up visits every 15 days.

Study Setting

The study was conducted at Alva's Homoeopathic Medical College and Hospital, Mijar, Karnataka. Participants were recruited from the hospital outpatient department (OPD), peripheral health camps, and affiliated outreach clinics.

Study Population

A total of 45 participants fulfilling the eligibility criteria were enrolled in the study. Both male and female participants aged between 18 and 25 years with a BMI below 18.5 kg/m² were included.

Inclusion Criteria

- Individuals aged 18–25 years.
- BMI less than 18.5 kg/m².
- Both male and female participants.
- Individuals willing to participate and provide informed consent.

Exclusion Criteria

- Individuals below 18 years or above 25 years of age.

- BMI ≥ 18.5 kg/m².
- Individuals suffering from chronic systemic diseases.
- Individuals receiving treatment for chronic medical illnesses.
- Individuals with pathological conditions affecting nutritional status.

Sample Size and Group Allocation

45 eligible participants were divided into three groups, each comprising fifteen participants.

- Group A (Experimental Group): Received Sabal serrulata mother tincture.
- Group B (Experimental Group): Received Alfalfa mother tincture.
- Group C (Control Group): Received dietary advice without homoeopathic medication.

Intervention

Participants in Group A received 10 drops of Sabal serrulata mother tincture diluted in approximately 50 mL of potable water once daily in the morning before breakfast.

Participants in Group B received 10 drops of Alfalfa mother tincture diluted similarly and administered once daily before breakfast.

Participants in Group C were advised to follow a balanced, calorie-adequate diet throughout the study period.

Treatment was continued for 90 consecutive days.

Clinical Assessment

A detailed case record was prepared for every participant using the standard homoeopathic case-taking format. Baseline information included:

- Age
- Sex
- Height
- Weight
- BMI
- Appetite
- General weakness
- Fatigue
- Associated complaints
- Relevant medical history

Height was measured using a calibrated stadiometer, while body weight was measured using a standardized

weighing machine. BMI was calculated using the formula:

$$\text{BMI (kg/m}^2\text{)} = \text{Weight (kg)} / \text{Height}^2 \text{ (m}^2\text{)}$$

Follow-up

Participants were reviewed every 15 days during the 90-day study period.

At each visit, the following parameters were recorded:

- Body weight
- Height
- BMI
- Appetite
- General well-being
- Compliance with treatment
- Any adverse events or dropout

Outcome Measures

Primary Outcome

- Improvement in Body Mass Index (BMI) after completion of the study.
- Secondary Outcomes
- Improvement in appetite.
- Reduction in weakness and fatigue.
- Improvement in general well-being.
- Clinical response observed during follow-up.

Statistical Analysis

All observations were systematically entered into data tables. Descriptive statistical methods were used to summarize demographic characteristics and treatment outcomes. The number of improved, non-improved, and dropout cases in each study group was calculated and presented as frequencies and percentages. Comparative interpretation of the three groups was performed based on the observed clinical outcomes.

III. RESULTS

Participant Characteristics

A total of 45 underweight participants aged 18–25 years were enrolled in the study. During the study period, 15 participants (33.3%) discontinued participation, while 30 participants (66.7%) completed the study and were included in the final analysis. Table 1. Distribution of Participants According to Gender

GENDER	NUMBER
MALE	14

FEMALE	31
TOTAL	45

The study population consisted predominantly of females (68.9%), whereas males accounted for 31.1% of the participants.

Treatment Outcomes

Table 2. Outcome of Sabal serrulata Mother Tincture (Group A)

OUTCOME	NUMBER	PERCENTAGE
Improved	3	20.0%
Not improved	7	46.7%
Dropped out	5	33.3%
total	15	100 %

Among participants receiving Sabal serrulata mother tincture, improvement was observed in three participants (20.0%). Seven participants (46.7%) showed no significant improvement, while five (33.3%) discontinued the study before completion.

Table 3. Outcome of Alfalfa Mother Tincture (Group B)

OUTCOME	NUMBER	PERCENTAGE
Improved	6	40.0%
Not improved	4	26.7%
Dropped out	5	33.3%
total	15	100%

Among participants treated with Alfalfa mother tincture, six participants (40.0%) demonstrated clinical improvement. Four participants (26.7%) showed no improvement, while five (33.3%) discontinued the study.

Table 4. Outcome of Dietary Advice (Group C)

OUTCOME	NUMBER	PERCENTAGE
Improved	2	13.3%
Not improved	8	53.3%
Dropped out	5	33.3%
total	15	100%

Participants receiving dietary advice alone demonstrated the lowest improvement rate, with only two participants (13.3%) showing improvement.

Table 5. Overall Participation Status

STATUS	NUMBER	PERCENTAGE
Completed study	30	66.7%
Dropped out	15	33.3%
Total	45	100%

Approximately two-thirds of enrolled participants completed the study, whereas one-third discontinued before the completion of treatment.

Clinical Improvement

Improvement was evaluated using changes in BMI together with associated clinical symptoms observed during follow-up. Participants receiving Alfalfa mother tincture demonstrated comparatively better improvement than those receiving Sabal serrulata mother tincture or dietary advice alone. Clinical improvement included increased appetite, reduction in generalized weakness and fatigue, improved energy levels, and improvement in selected associated complaints such as hair fall and menstrual irregularities. Participants treated with Sabal serrulata also showed improvement in appetite and general well-being, although the number of improved cases was lower than in the Alfalfa group. The dietary advice group demonstrated the least improvement during the study period.

Comparative Outcome

Table 6 : The comparative effectiveness of the three study groups is summarized below

TREATMENT GROUP	IMPROVED	NOT IMPROVED	DROPPED OUT
SABAL SERRULATA	3	7	5
ALFALFA	6	4	5
DIETARY ADVICE	2	8	5

Among the three groups, the Alfalfa mother tincture group showed the highest proportion of improved participants, whereas the dietary advice group demonstrated the lowest proportion of improvement.

IV. DISCUSSION

The present comparative clinical study was undertaken to evaluate the effectiveness of Sabal serrulata and Alfalfa mother tinctures in underweight individuals aged 18–25 years. A total of 45 participants with BMI below 18.5 kg/m² were enrolled and allocated equally into three study groups. The interventions included Sabal serrulata mother tincture, Alfalfa mother tincture, and dietary advice alone over a period of 90 days. Female participants constituted the majority of the study population (68.9%), while males represented 31.1%. This finding suggests that low BMI was more frequently observed among females attending the study setting, although the study was not designed to determine gender-based prevalence. Among the three intervention groups, the Alfalfa mother tincture group demonstrated the highest proportion of participants showing improvement. Six of fifteen participants in this group showed clinical improvement, whereas improvement was observed in three participants receiving Sabal serrulata and two participants following dietary advice alone. These observations indicate a comparatively better response among participants receiving Alfalfa mother tincture within the limitations of this study. Clinical improvement was not restricted to BMI alone. Participants who responded to treatment also reported improvement in appetite, reduction in generalized weakness and fatigue, and better overall well-being. In selected female participants, reduction in hair fall and improvement in menstrual irregularities were also observed during follow-up. These associated improvements may reflect an overall improvement in nutritional status and general health as recorded during the study.

One-third of enrolled participants discontinued the study before completion. The relatively high dropout rate reduced the number of participants available for final analysis and represents an important limitation of the study. Future investigations should adopt strategies to improve participant retention and follow-up. Although encouraging clinical improvement was observed in some participants, the study has several limitations. The sample size was small, the follow-up period was limited to 90 days, and treatment allocation was not reported as randomized or blinded. Statistical analysis was primarily descriptive, limiting the ability to draw firm conclusions regarding comparative

effectiveness. Therefore, the findings should be interpreted with caution and considered preliminary. The findings of this study suggest that both Sabal serrulata and Alfalfa mother tinctures may have a role in improving appetite and nutritional status in selected underweight individuals. However, additional well-designed randomized controlled clinical trials with larger sample sizes, longer follow-up periods, and appropriate statistical analyses are required to establish their effectiveness more conclusively.

Strengths of the Study

- Comparative evaluation of two commonly used homoeopathic mother tinctures.
- Inclusion of a dietary advice group for comparison. - Prospective follow-up over 90 days.
- Assessment of BMI together with associated clinical symptoms.

Limitations of the Study

- Small sample size.
- High dropout rate.
- Short duration of follow-up.
- Single-centre study.
- Descriptive statistical analysis.
- Lack of randomization and blinding.

V. CONCLUSION

The present comparative clinical study suggests that both Sabal serrulata and Alfalfa mother tinctures were associated with improvement in some underweight individuals aged 18–25 years. Among the interventions studied, Alfalfa mother tincture demonstrated comparatively better improvement in BMI, appetite, and general well-being than Sabal serrulata mother tincture and dietary advice alone. Nevertheless, because of the limited sample size, participant dropout, and descriptive study design, these findings should be interpreted cautiously. Larger, randomized, controlled clinical trials are necessary before definitive conclusions regarding clinical effectiveness can be drawn.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this study.

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Ethical Considerations

Participation in the study was voluntary. Written informed consent was obtained from all participants before enrolment. Confidentiality of participant information was maintained throughout the study, and the investigation was conducted in accordance with institutional ethical principles

BIBLIOGRAPHY REFERENCES

- [1] World Health Organization. BMI classification and underweight criteria.
- [2] Centers for Disease Control and Prevention (CDC) About Adult BMI.
- [3] Keys A, Fidanza F, Karvonen MJ, Kimura N, Taylor HL. Indices of relative weight and obesity.
- [4] International Obesity Task Force (IOTF). BMI cut-offs for children and young adults.
- [5] Millennium Cohort Study. Risk factors and prevalence of persistent thinness in adolescents.
- [6] Food and Agriculture Organization (FAO)/WHO. Adult undernutrition classification.
- [7] National health resources on causes and management of underweight.
- [8] Clarke JH. A Dictionary of Practical Materia Medica.
- [9] Boericke W. Pocket Manual of Homoeopathic Materia Medica.
- [10] Allen HC. Keynotes and Characteristics with Comparisons of Some of the Leading Remedies.
- [11] Hering C. Guiding Symptoms of Our Materia Medica.
- [12] Murphy R. Lotus Materia Medica.
- [13] Homoeopathic proving literature on Medicago sativa (Alfalfa).
- [14] Classical homoeopathic texts describing Sabal Serrulata.
- [15] Hale ES. New Remedies Clinical Experiences.

- [16] Clarke JH. Clinical indications of Sabal Serrulata.
- [17] Boericke W. Materia Medica description of Sabal Serrulata.
- [18] Allen HC. Proving symptoms of Sabal Serrulata.
- [19] WHO. Nutrition and health consequences of underweight.
- [20] Standard homoeopathic Materia medica references.