WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 13, Issue 24, 817-833. Research Article ISSN 2277–7105

A RANDOMIZED CONTROL TRIAL TO INVESTIGATE THE EFFICACY OF YOGA MODULE AND YOGIC SAATVIK DIET MODULE IN GENERALIZED ANXIETY DISORDER

Shubham Sharma[1]* and Ravi Kumar[2]

[1]Assistant Professor, Dept. of Swasthavritta and Yoga, Surajmal Medical College of Ayurveda and Hospital, Kichha, UK, Pin. 263148.

[2]Associate Professor, Dept. of Swasthavritta and Yoga, National Institute of Ayurveda, Jaipur, Raj., pin.302002.

Article Received on
02 November 2024,

Revised on 22 Nov. 2024,
Accepted on 12 Dec. 2024

DOI: 10.20959/wjpr202424-34967

***Corresponding Author**
Dr. Shubham Sharma
Assistant Professor, Dept. of Swasthavritta and Yoga, Surajmal Medical College of Ayurveda and Hospital, Kichha, UK, Pin. 263148.

ABSTRACT

Anxiety is a common human emotion that affects people everywhere, causing substantial impairment and around 2.74 million deaths annually. The age-old practise of *Ayurveda* emphasises the relationship between the body and the mind and sees life as a four-dimensional entity. *Ayurvedic* writings mention *Chittodvega*, which is linked to contemporary anxiety illnesses and emphasizes the part imbalances play in the functioning elements of the mind. *Manodvega* also called *Gadodvega* is considered anxiety in modern *Ayurveda* and is associated with Generalized Anxiety Disorder (GAD). With a 5% lifetime occurrence rate, GAD is treated with medication, psychosocial therapy and newer approaches including acceptance and mindfulness. Three therapies are suggested by *Ayurveda* for mental health issues: *Satvavajaya* (Mind-based therapy), *Yuktivyapashraya* (Rational therapy) and *Daivavyapashraya* (Divine therapy). Potential therapies include the *sattva* guna-promoting *Saatvika* diet and yoga, which integrates the mind, body and spirit. A comprehensive approach to mental well-being that bridges traditional wisdom and modern science is being investigated in clinical research that looks at the effects of *yoga* combined with a Saatvika diet on anxiety. In a recent study, it was shown that stress affected 74% of Indians and that 88% of them suffered some sort of anxiety condition. Anxiety disorders, which affect 15.7 million people annually in the U.S., frequently go untreated because anxiolytic medicines only provide temporary relief and have adverse effects.

Alternatives to medication such as *yoga*, have the potential to enhance wellbeing, reduce stress and promote mental equilibrium. In the contemporary setting, the relationship between anxiety and nutrition becomes critical since stress affects food decisions, which in turn creates a feedback loop that affects preferences in the future. Comprehending the correlation between food and mood emphasizes the necessity of adopting comprehensive strategies to tackle the ubiquitous problems of stress, sadness, and anxiety in modern lives.

KEYWORDS: Anxiety, *Saatvik ahara*, *Yoga* module, *Ashawagandha churn.*

INTRODUCTION

Anxiety is one of the basic human emotions[1] (Plutchik, 1980) and is present in everybody at any moment of time, often on a daily basis to some extent. Recent estimates indicate that the global prevalence of disability associated with anxiety disorders, measured in Years Lived with Disability (YLDs), is 390 per 100,000 population. The overall Disability Adjusted Life Years (DALYs) for all anxiety disorders are approximately 700 for females and 400 for males.

The peak disability comes out in young adult age group from 15 to 49 years. Anxiety disorders rank as the sixth major contributor to Years Lived with Disability (YLDs), following low back pain, major depressive disorder, other musculoskeletal diseases, neck pain, and falls. The primary consequences of anxiety disorders include the presence of concurrent mental and physical conditions, substance use disorders, and, albeit to a lesser extent, the risk of suicide.

Nearly 2.74 million deaths annually associated with anxiety disorders.

From the time immemorial human being is searching the cause and remedies for their anxiety. According to *Ayurveda* life is a four-dimensional entity. Ayu, the essence of living beings, comprises the amalgamation of *Sharira*, *Indriya*, *Sattva*, and the *Atma*. The distortion, negativity, and excessive utilization of *Kal* (time), *Buddhi* (intelligence), and *Indriya*'s (sense objects) constitute the triple cause of both mental and physical disorders.[2] Psychological issues such as envy, grief, fear, anger, vanity, and aversion stem from errors in intellect. The mind perceives the object of contemplation, analysis, reasoning, meditation, determination, and more. The mind's functions include controlling the senses, practicing self-restraint, and engaging in reasoning and analysis. Beyond this lies the domain of *buddhi* (intellect).[3]

Charaka described three types of *Sattva* or Psyche pure, *rajasa* and *tamasa* which are influenced by the their *maha gunas Sattva, Rajas,* and *Tamas* the primary cosmic properties/qualities - the intelligence, energy and inertia, respectively. Both the body and mind experience disorders and pleasures, with the appropriate balance being the source of enjoyment.

Manas which becomes occupied with rajas and tamas, loses its equilibrium state and gets disordered. Its three functional aspects, *Dhi, Dhrti*, and *Smrti* undergo, *bhramsa* (disorganisation). Persons with such a mind state understand things differently from what they actually are, act in a different way because of faulty understanding, fail to recall the past experiences to get benefit out to it. Hence, all their actions are improper, unusual and even harmful to themselves and to others. These activities results in *prajnaparada* or *adharma* (unrighteous conduct) and serve as potent causes for mental disorders. *Chittodvega is among* the mental disturbances detailed in *Ayurvedic literature.*

While not specifically delineated as a distinct ailment in Ayurvedic texts, *Chittodvega* is referenced in the context of *unmada roga* (psychiatric disorders) as a contributing factor. Additionally, *Acharya Charaka* categorizes it as a mental disorder.

But in modern *Ayurvedic* texts, it has been described as *Manodvega* or *Gadodvega* and can be correlated with Anxiety. The symptoms of this disease are mostly similar with the Generalized Anxiety Disorder (G.A.D.). Individuals with Generalized Anxiety Disorder (GAD) undergo enduring feelings of anxiety and excessive worry that are disproportionate to actual events or situations, accompanied by various cognitive and physical symptoms.

Ayurvedic texts consistently underscore the significance of mental health. According to *Ayurveda*, the body (*Sarira*) and the mind (*sattva*) are interconnected in all aspects of life. The *Ayurvedic* perspective on health and disease is inherently psychosomatic. *Ayurveda* places a significant emphasis on the role of the mind compared to the body. This is evident in the definition of health, the understanding of disease causation, the approach to patient examination, the concept of psychosomatic constitution (*Prakrti*), guidelines for mental and physical hygiene, and various aspects, including the utilization of psychotropic substances known as *Medhya Rasayanas* and *Medhya dravyas*.

Treatment of GAD consists of Pharmacotherapy, Psychosocial treatment, and Combined pharmacotherapy and psychotherapy. Side effects of pharmacotherapy are risk of dependence and (uncommonly) abuse, relapse after drug discontinuance, sedation along with certain systemic complications. Generalized Anxiety Disorder (GAD) has a lifetime occurrence rate of 5 percent, typically initiating in the late teenage years and displaying a higher prevalence in women compared to men. Contemporary advancements in psychosocial treatments for GAD have incorporated acceptance and mindfulness techniques into conventional Cognitive Behavioral Therapy.

Ayurveda three types of treatment are advised for mental disorders; *Daivavyapashraya chikitsa* (divine therapy) like *mantra* (incantation), *mani* (wearing gems), *homa* (sacrifice), *Prayaschita* (ceremonial penitence) and *Yuktivyapashraya chikitsa* (rational therapy) i.e. use of drugs and therapies and *satvavajaya*. The relationship between nutrition and anxiety can independently and interactively affect health, and the stage of life when either factor becomes imbalanced influences the severity of the outcome. An avenue through which food might shape future choices is by influencing mood and, consequently, behaviour.

As per *Ayurveda*, a *Saatvika* diet is one that enhances the quality of *sattva guna* in the body. Foods categorized as *Saatvika* are those that contribute to longevity, virtue, strength, health, happiness, and joy. These foods are described as juicy, smooth, substantial, and nutritious.[4] *Yoga* falls within the realm of *satvavajaya chikitsa*, representing an integration of mind, body, and soul. Recent findings indicate encouraging outcomes of *yoga* in the treatment of diverse psychiatric disorders.[5] Hence, a decision was made to initiate a clinical trial on a group intervention that is deemed safe, effective, cost-effective, and easy to implement for the management of mental diseases, with the aim of promoting and sustaining mental health.

Yoga with *Saatvika* diet may offer an alternative management option. No study has been conducted on *saatvik* diet on anxiety until now. To investigate this we had taken this study.

Research methodology

Research question –

1. Is *Yoga* a viable therapeutic modality for the management of Generalized Anxiety Disorder (GAD)?
2. Does *Sattvika* diet have any role on reducing GAD?
3. Whether *Yoga* and *Saatvika* diet act synergistically in reducing GAD?

Hypothesis

Null Hypothesis (H0) - There is no difference between the effect of *Yogic Saatvika* diet module, yoga module and *Ashwagandha Churna* in management of Generalized Anxiety Disorder.

Research Hypothesis (H1) - There is significant difference between the effect of *Yogic Saatvika* diet module, yoga module and *Ashwagandha Churna* in management of Generalized Anxiety Disorder.

MATERIAL AND METHODS

Study design

- **Literature study:** All the classical and contemporary available literature searched and critically evaluated. The source of literature printed and online both.
- **Total duration of study:** 18 months
- **Recruitment period:** 6 months
- **Therapy period:** 8 weeks.
- **Follow-Up Period**: Follow up was done at every 2 weeks.
- **Type of study:** Interventional
- **Study design:** Randomized comparative open clinical trial.
- **Allocation concealment method:** SNOSE
- **Number of groups:** Four groups
- **Type of groups:** Comparative
- **Sample size:** 15 cases in each group was planned include in the clinical trial.
- **Randomization methods:** By generating random number sequence used related software
- **Source of data (Population of interest) -** Patients who fulfilling the inclusion criteria was selected from O.P.D. and department of Swasthavritta and *Yoga* of N.I.A. hospitals, Jaipur (Rajasthan).
- **Sample size-** 60 patients was registered and they divided into group A, group B, group C and group D. there were 15 patients in each group.

Research question

1. Is *Yoga* a viable therapeutic modality for the management of Generalized Anxiety Disorder (GAD)?
2. Does *Sattvika* diet have any role on reducing GAD?
3. Whether *Yoga* and *Saatvika* diet act synergistically in reducing GAD?

Hypothesis

Null Hypothesis (H0) - There is no difference between the effect of *Yoga* module, *Yogic Saatvika* diet module and *Ashwagandha Churna* in management of Generalized Anxiety Disorder.

Research Hypothesis (H1) - There is significant difference between the effect of *Yoga module*, *Yogic Saatvika* diet module and *Ashwagandha Churna* in management of Generalized Anxiety Disorder.

Aim

To investigate the efficacy of the *Yoga* module, *Yogic Saatvika* diet module and Ashwagandha *churna* on reducing GAD using a randomized controlled trial approach.

Objectives

1. To study the role of *Yoga* module, *Yogic Saatvika* diet module and *Ashwagandha churna* on reducing the GAD.
2. Preparation of Dietary and *Yoga* module for the patients of GAD.

MATERIAL AND METHODS

Study design

- **Literature study:** All the classical and contemporary available literature searched and critically evaluated. The source of literature printed and online both.
- **Total duration of study:** 18 months
- **Recruitment period:** 6 months
- **Therapy period:** 8 weeks.
- **Follow-Up period**: Follow up was done at every 2 weeks.
- **Type of study:** Interventional
- **Study design:** Randomized comparative open clinical trial.
- **Allocation concealment method:** SNOSE
- **Number of groups:** Four groups
- **Type of groups:** Comparative
- **Sample size:** 15 cases in each group was planned include in the clinical trial.
- **Randomization methods:** By generating random number sequence used related software

- **Source of data (Population of interest)** - Patients who fulfilling the inclusion criteria was selected from O.P.D. and department of Swasthavritta and *Yoga* of N.I.A. hospitals, Jaipur (Rajasthan).
- **Sample size-** 60 patients was registered and they divided into group A, group B, group C and group D. there were 15 patients in each group.

Detail of intervention:

Sr. No.	**Group A N=15**	**Group B N=15**	**Group C N=15**	**Group D N=15**
Intervention	*Ashwagandha Churna* Dose – 3 gm BD With milk + Yoga Module 1hr/Day	*Ashwagandha Churna* Dose – 3 gm BD With milk + Yogik Saatvik Diet Module	*Ashwagandha Churna* Dose – 3 gm BD With milk + *Yoga* Module 1hr/Day + *Yogik Saatvik* Diet Module	*Ashwagandha Churn*a Dose – 3 gm BD With milk
Duration	8 weeks	8 weeks	8 weeks	8 weeks

Inclusion criteria

- Principal diagnosis of generalized anxiety disorder according to DSM-V diagnostic criteria (Diagnostic and Statistical manual of mental disorders)
- Patients 18-60 years of age irrespective of sex and religion
- Agree to participate in the study and have filled out a written consent form.

Exclusion criteria

- IPD patients
- COPD patients
- Individuals who lack a capacity to consent, or whose capacity to provide consent is questionable to the investigator
- Diagnosed cases of suicidal ideation, schizophrenia, bipolar disorder etc
- Current illicit drug use
- Excessive regular use of alcohol
- Patients on psychotropic medication use
- Current participation in psychotherapy or cognitive behavioral therapy
- Pregnancy
- Shift work schedule
- Active dieting for weight loss

- Arthritis requiring daily medications and unable to abstain from meds for duration of study period

Outcome - assessment criteria

Primary outcome

➢ Change in Hamilton Anxiety Rating Scale (HAM) [time frame: pretest and post test at 8 weeks] HAM is a questionnaire for detecting the severity and changes of anxiety.

Secondary outcomes

➢ Beck anxiety inventory [time frame: pretest and post test at 8 weeks]
The total items of beck anxiety inventory are 21. The score of each item is from 0-3. The score 0-7 is the least mild anxiety, 8-15 is the mild anxiety, 16-25 is the moderate anxiety, and 26-63 is the severe anxiety

➢ Change In Penn State Worry Questionnaire (PSWQ) [time frame: pretest and post test at 8 weeks] PSWQ is a questionnaire for detecting the severity of GAD

RESULT AND DISCUSSION

Result

In 60 patients who completed the study, the results of the *ashwagandha*, *yoga* module and *yogic saatvik* diet module. All of the outcomes were measured using the stat Graph Pad prism 10 trial's software.

❖ **Showing Effect of *yoga* module, *yogic saatvik* diet Module and *Ashwagandha* on Subjective Parameters (nonparametric paired t-test)**

Before and After treatment: effect of Intervention on GAD assessed through the Hamilton Scale:

The mean score of Hamilton scale of group A 17.60 before treatment which lowered down to13.93 after treatment with S.D± 2.095, giving a relief of 20.85 % which is statistically extremely significant (P = 0.0001), Group B 17.40 before treatment which lowered down to14.53 after treatment with S.D± 0.994, giving a relief of 16.49% which is statistically extremely significant (P = 0.0001), group C 19.86 before treatment which lowered down to15.93 after treatment with S.D± 1.668, giving a relief of 19.78 % which is statistically extremely significant (P = 0.0001) and group D 19.86 before treatment which lowered down to16.20 after treatment with S.D± 1.589, giving a relief of 18.42 % which is statistically extremely significant (P = 0.0001).

Before and After treatment: Effect of intervention on GAD (Generalized Anxiety Disorder) assessed through the Beck Anxiety Inventory:

The Beck Anxiety Inventory mean score for Group A was 19.33 pre-treatment, reducing to 15.46 post-treatment (SD±1.885), yielding a highly significant relief of 20.02% (P = 0.0001). Similarly, Group B exhibited a reduction from 16.60 to 12.46 (SD±1.846), with a significant relief of 24.93% (P = 0.0001). Group C's scores decreased from 19 to 14.93 (SD±1.624), resulting in a relief of 21.42% (P = 0.0001). Group D displayed a decrease from 20.40 to 16.73 (SD±2.526), indicating a relief of 17.99%, highly statistically significant (P = 0.0001).

Before and After treatment: effect of Intervention on GAD (Penn State worry Questionnaire):

The mean score of Penn State worry Questionnaire of group A 45.33 before treatment which lowered down to 40.60 after treatment with S.D± 2.434, giving A relief of 10.43% which is statistically extremely significant (P = 0.0001), Group B 45.06 before treatment which lowered down to 38.73 after treatment with S.D± 2.820, giving a relief of 14.11% which is statistically extremely significant (P = 0.0001), group C 46.66 before treatment which lowered down to 39.86 after treatment with S.D± 3.212, giving a relief of 14.57% which is statistically extremely significant (P = 0.0001) and group D 50.33 before treatment which lowered down to 40.04 after treatment with S.D± 3.283, giving a relief of 19.72% which is statistically extremely significant (P = 0.0001).

Result Before and After intervention (inter group) assessed through all three anxiety scales: -

In every comparison (Groups A-B, A-C, A-D, B-C, B-D, C-D), the consistently elevated p-values, surpassing 0.05, indicate a lack of statistical significance in mean differences between the groups. This implies that observed variations in means are likely due to random chance rather than meaningful distinctions. The findings support the acceptance of the null hypothesis, suggesting no compelling evidence to reject the idea that the group means are equivalent across all comparisons in this study.

DISCUSSION

Discussion on the conceptual study

Acharya Charaka emphasizes thorough research analysis for the development of *Siddhanta*, or theories. In *Ayurveda*, *Manas* plays a vital role, residing in the *Hridaya* (brain) and influencing various aspects of life. *Chittodvega* is a minor psychological disorder. it is

explored with symptoms akin to generalized anxiety disorders. The pathogenesis involves disturbances in *Manas Dosha*, *affecting Prana, Vayu, Pitta* and *Kapha,* leading to psychosomatic manifestations.

Chittodvega symptoms predominantly stem from *Vata* and *Pitta* vitiation and modern research links anxiety disorders to alterations in the GABA neurotransmitter system. GABA receptors, especially type I and II are implicated, shedding light on the pathophysiology. Treatment involves understanding the Samprapti Vighatana process, addressing the imbalance of Doshas, *Agni* and *Ojas.*

In modern medicine, benzodiazepines target GABA receptors while buspirone offers a unique approach by acting on serotonin receptors. Serotonin and neuroactive steroids also play a role in generalized anxiety disorders. Overall, the synthesis of traditional *Ayurvedic* principles with contemporary neurobiology provides a comprehensive perspective on the understanding and treatment of *Chittodvega.*

Discussion on clinical study

In a study of 60 patients with Generalized Anxiety Disorder (GAD), various *Nidanatmaka* aspects were examined. The majority were women (61.66%) and a significant number fell within the 18-30 age group (66.66%), experiencing career and future-related anxiety. The Hindu religion dominated (73.33%) and patients were mostly from urban areas, potentially influenced by the fast-paced urban lifestyle.

Regarding education, socio-economic status, occupation and marital status, a correlation between education and GAD was suggested, with middle-class individuals, service persons and married individuals showing higher prevalence. Urban habitats and irregular dietary habits, particularly a *Tamasika* diet were linked to the manifestation of the disease.

Psychic factors like *Irshya, Bhaya* and *Krodha* were associated with *Vishama Agni* in 48.33% of patients. *Kroora Kostha* was observed in 41.66% of cases but its significance remains unclear. Addiction was prevalent (53.33%), with 10% addicted to substances like alcohol and 43.33% to tea or coffee.

Asamyaka nidra (disturbed sleep) was a notable symptom (53.33%) and the majority exhibited *Dvandvaja Prakriti* with *Vata-Kapha Prakriti* being most common (40.00%).

Tamas Predominant *Manasa Prakriti* was associated with 51.67% of patients, suggesting a link between *Tamas* and GAD.

Madhyama Sara, Samhanana and *Pramana* were predominant in 58.33%, 71.67% and 68.33% of patients, respectively, indicating a balance in sustenance and constitution. *Avara Satva* (68.33%) was associated with increased susceptibility to illness, aligning with *Charaka's* teachings.

Middle-aged individuals (90.71%) exhibited *Madhyama Vaya*, suggesting an increased prevalence of depression in this age group due to life stressors. *Jangala Desha* accounted for 100% of cases in the studied region. The findings highlight the multifaceted nature of GAD, incorporating psychological, social and lifestyle factors into its manifestation.

Discussion on Before and After intervention (intra group) assessed through the Hamilton Scale the Beck Anxiety Inventory, and the Penn State Worry Questionnaire:

The statistical significance (P = 0.0001) underscores the robustness of these findings. These results highlight the efficacy of the treatment in mitigating symptoms assessed by the Hamilton scale, the Beck Anxiety Inventory and the Penn State Worry Questionnaire across diverse groups. This further supports its clinical relevance and applicability.

Discussion on Before and After intervention (inter group) assessed through all three anxiety scales: -

In each comparison (Groups A-B, A-C, A-D, B-C, B-D, C-D), the consistently elevated p-values exceeding 0.05 signify a lack of statistical significance in mean differences among the groups. This suggests that the observed differences in means are probably attributable to random chance rather than meaningful distinctions. These results reinforce the acceptance of the null hypothesis, indicating insufficient evidence to reject the notion that the group means are comparable across all comparisons in this study.

Probable mode of action of *Yoga* module:

The concept of *yoga* encompasses *Karma Yoga*, emphasizing performing actions in a way that avoids bondage. According to the *Gita*, executing actions with detachment prevents bondage, suffering, or deformity. *"Dhyana Yoga"* or "The *Yoga* of Meditation" is pertinent to practices promoting mental calmness. Studies highlight *yoga's* therapeutic potential for generalized anxiety disorder (GAD) and reducing cortisol secretion linked to stress response.

Yoga fosters serenity in physical and cognitive domains. Deliberate respiration and meditation in *yoga* offer health benefits and easing worry-related symptoms. It enhances attention, making it a compelling therapeutic option for GAD. *Yoga* cultivates heightened sensory perception and aiding body awareness. Frequent practice helps those with GAD who are prone to self-deprecation by fostering self-acceptance and compassion. In summary, *yoga* emerges as a holistic approach addressing physical, mental and emotional aspects for those managing GAD.

Probable mode of action of *Yogic saatvik* diet module:

Many yogic traditions like *Hatha Yoga*, advocate for a vegetarian diet rooted in the principle of *ahimsa* (non-violence) and the belief that it aligns better with spiritual practices. The *Bhagavad Gita* mentions three types of *Ahar* (food): *Satvik*, *Rajasik* and *Tamasik.*

Satvik Ahar, being easily digestible and harmonizing physical and mental health, aids in anxiety reduction by maintaining a peaceful state of mind.

Vegetarian diets often associated with lower saturated fat and higher antioxidants, show potential in mitigating inflammatory processes linked to mental health disorders including anxiety. The correlation between gut health and mental well-being underscores the importance of dietary fiber in vegetarian diets. These diets are essential for optimum brain function and mood control since they are high in minerals including zinc, magnesium and B vitamins.

Vegetarian diet adherents frequently participate in health-promoting activities that may lessen symptoms of anxiety. Studies indicate that magnesium and omega-3 fatty acids, which are present in plant-based diets, may help with anxiety management. A vegetarian diet may be beneficial for those with Generalized Anxiety Disorder (GAD), even if a conclusive scientific consensus on dietary patterns and anxiety is still awaiting.

Probable mode of action of *Ashwagandha churn*:

Ashwagandha is a plant deeply rooted in traditional Indian medicine, is recognized as an adaptogen for its ability to enhance the body's resistance to stress. Numerous studies support its efficacy in reducing anxiety, attributing this effect to a decrease in the stress hormone cortisol. Elevated cortisol levels, associated with worry and anxiety, are lowered with *ashwagandha* use.

Research indicates ashwagandha's potential to augment mood and alleviate depression symptoms by alleviating anxiety and improving sleep quality. Its documented efficacy in stress reduction and relaxation is linked to a decrease in stress-related hormones.

Ashwagandha's positive impact on sleep quality is noteworthy, attributed to its anxiety-alleviating and relaxation-inducing properties. In the management of Generalized Anxiety Disorder (GAD), a study with a sample size of 60 individuals demonstrated a significant reduction in anxiety symptoms with 300 milligrams of ashwagandha twice daily for six weeks.

Beyond clinical studies, preclinical evidence suggests *ashwagandha's* anxiolytic effects, showing a reduction in stress-related hormones like cortisol and an increase in gamma-aminobutyric acid (GABA), known for its calming properties. These findings collectively affirm *ashwagandha* as a potential natural remedy for anxiety and stress-related conditions.

CONCLUSION

This comprehensive research project unveils crucial insights into the intricate interplay between the mind and health within the *Ayurvedic* framework. It highlights the primacy of the mind in influencing overall well-being and identifies *Chittodvega* as the Ayurvedic equivalent to Generalized Anxiety Disorder (GAD), emphasizing the role of *Rajas* and vitiated *Vata*. The study explores the neurotransmitter aetiology of anxiety disorders, suggesting the potential efficacy of drugs affecting neurotransmitters. Encouragingly, Ayurvedic interventions, including a *yoga* module, *yogic saatvik* diet and *ashwagandha churn*, demonstrate positive outcomes in managing *Chittodvega*, paving the way for cost-effective and toxicity-free mental health care. The absence of side effects further underscores the safety and potential for prolonged use of these *Ayurvedic* modalities. The research also acknowledges future avenues for deeper investigations into the mind-body connection in *Ayurveda*.

Saatvik Diet Module and Yoga module

(For Generalized Anxiety Disorder)

Items	**Pathya aahar for GAD**	**Apathya aahar for GAD**
	Saatvik diet	Rajsik and tamsik diet
Cereals	Rice, wheat, barley, once-twice a week -millet, jowar, oats, legumes	Food with excessive starch, excessive gluten like wheat
Pulses	Green gram lentil, Gram lentil	Horse gram, red lentil, black lentil, yellow lentil
Vegetables	Pointed gourd, Jackfruit, Spiny	Garlic, onion, Pungent vegetables,

	gourd, Bitter gourd, Cucumber, Raw Banana, Cluster fig, Amaranth leaves, White radish, Brinjal, Melde Pudding veg. Spinach, Indian round gourd, Fenugreek leaves, Carrot, Cranberries, Indian yam, once-twice a week - Bottle gourd, Plum fruit, Indian lilac	excessive intake of potato, cabbage, broccoli, cauliflower, eggplant, radish, Fried vegetables etc.
Fruits	Black berry, Grapes, Orange, Jambir lemon, apple, Chebulic myrobalan, Pomegranate, mango, papaya, guava, pear, coconut, gooseberry, sweet plum, banana, lychee, persimmon, wood apple or stone apple, watermelon, musk melon.	soury fruits -Black currant, Sweet lemon, Pear, Plum, golden apple, Colocasia root (taro root), jack fruit, etc.
Milk products	Cow milk, Buttermilk, Cow Ghrit	Pasteurized milk, soury milk, soury butter, soury buttermilk
Dry fruits	Dates, Almond, Cashew nut, Raisin, Walnut, Raisin, sesame seed, flax seed, pumpkin seed etc.	roasted and too much salty, Fried seeds, grains etc.
Spices	Rock salt (low quantity), Fennen seeds, Ginger, Cumin seeds, Cloves, Coriander, Cardamom green/Black, Cinnamon, sweet neem leaves.	Red Chilli, carom seed, long pepper, pickles, & vinegar, asafoetida, tamarind, white salt.
Drinks	Warm water, Lemon juice, sweetened yogurt, fresh cowurine (depend on your choice), Butter milk, fresh Fruit juice, Panak.	Wine, alcoholic drink, soda, cold drink, tea, coffee, Hard liquor like whisky, rum, tobacco, drug etc.
Saled	Fresh vegetables- Carrot, Tomato, White radish, Pudding vegetable	Onion, green chilli,
Oils	Coconut, sesame, olive.	Refined oil, mustard oil, oil warmed many times.
Sweets	Honey, dates, crystal sugar, jaggery	brown or black chocolates & others sweets prepared by white sugar, white flour, White sugar, white fine flour.
Others		Meat, fish, eggs, types of jam, jellies, flavored & preserved foods, juices, chips, snacks and food preserved with salt or sugar

S. No.	Practice			Duration
1	***Sukshma vyayama* (Loosening exercises)**			5 min
2	***Asanas* (*Yoga* postures)**			20 min
	Tadasana	2 min	2 rounds	
	Vrikshasana	2 min	2 rounds	
	Paschimmotanasana	2 min	2 rounds	

	Sashankasana	2 min	2 rounds	
	Singhgarjanasana	2 min	2 rounds	
	Bhujangasana	2 min	2 rounds	
	Shalabhasana	2 min	2 rounds	
	Shavasana	6 min	1 round	
3	***Pranayamas* (Voluntarily regulated breathing)**			15 min
	Nadishudhhi	5 min		
	Bhramri	5 min		
	Ujjayi	5 min		
4	**Relaxation (in *Shavasana*)**			5 min
5	***Dhyana* (Meditation)**			10 min

REFERENCES

1. Charaka Samhita with Ayurveda Deepika commentary by Cakrapanidatta, Chaukhambha Surbharati Prakashana, Varanasi.
2. Sushruta Samhita of Maharsi-susruta, Published by Chaukhambha Sanskrit Sansthan Varanasi, 2003; III: 17.
3. Sushruta: Sushruta Samhita with the commentary of Dalhana edited by Jadavji Trikamji Acharya, Chaukhambha Orientalia, Varanasi, 1998.
4. Vagbhata- Ashtanga Hridaya with commentaries Vidhyotani by Kaviraj Atri Dev Gupt.
5. Vagbhata- Ashtanga Sangraha with commentaries Vidhyotani by Kaviraj Atri Dev Gupt.
6. Sharangadhara Samhita, Bhela Samhita, Vrindha Madhava of Sri Madhavakara with "Madhukosa" Sanskrit Commentary by Sri Vijayaraksita and Srikanthadatta, Vidyotini Hindi Commentary and Notes by Sri Sudarshana Sastri - Chaukhaba Sanskrit Sansthana - Varanasi.
7. Rgveda, Yajurveda, Atharvaveda, Bhagavat Geeta, Patanjali Yoga Sutra.
8. Srimadbhagavadgita Tattvavivechani English Commentary Jayadayal Goyandka (Bhagwadgita, 2/56).
9. Bhavprakasanighantu of Sri Bhavamisra commentary by Dr. K.C. Chunekar, Chaukhambha Bharati Academy, Varanasi.
10. Rajnighantu of Pandit Narahari, Krishanadas Academy, Varanasi.
11. Kaidevanighantu of Sri Kaideva.
12. Chakradatta of Sri Cakrapanidatta with "Vaidyaprabha," Hindi commentary, Chaukhambha Sanskrit Sansthana, Varanasi.
13. Charaka Samhita with Ayurveda Deepika commentary of Cakrapanidatta, Chaukhambha Surbharati Prakashana, Varanasi.

14. Dravyaguna Vijnana Vol. II, Vegetable drugs by Prof. P. V. Sharma, Chaukhambha Bharati Academy, Varanasi.
15. Sabdakalpadurama by Raja Radha Kanta Deva, The Chaukhambha Sanskrit Series office, Varanasi.
16. Sanskrit - English Dictionary. Etymologically and Philologically Arranged by Sir Monier Williams, Oxford University Press - Landon.
17. Vachaspathyam, A Comprehensive Sanskrit Dictionary completed by Sri Tarantha Tarkavacaspati, The Chaukhambha Sanskrit Series Office, Varanasi.
18. The Practical Sanskrit - English Dictionary edited by P.K. Gode and C.G. Karve, Prasad Prakashan, Pune.
19. Yoga Ratnakar, Bhaishajya Ratnavali.
20. Diagnostic and Statistical Manual of Mental Disorders, 4th edition, text revised, Published by American Psychiatric Association.
21. Davidson Sir Stanley. Davidson's Principles and practice of medicine, 2007; 20.
22. Harrison T.R., Harrison's Principles of internal medicine, 2008.
23. Kaplan and Sadock Synopsis of Psychiatry, Behavioural Sciences /Clinical Psychiatry, Dorland: Pocket Medical Dictionary, Oxford and IBH Publishing Co. Pvt. Ltd, 1998; 8.
24. Kotecha Rajesh Kumar & Singh G. A Clinical Study on the Treatment of Atattvabhinivesa with Reference to Anxiety Status, 1991.
25. Babu Suresh, Research Methodology for Ayurvedic Scholars, Published by Choukhamba Orientalia, Varanasi, 2004.
26. Mahajan B.K. Methods in Biostatistics, Published by Jaypee Brothers, New Delhi, 1997; 6.
27. Chaube, D. Mind and body relation in Indian philosophy.
28. Golwalla Aspi F. and Sharukh A.: Medicine for students (A, Reference Book for the Family Physician); Published by Dr. A.P. Golwalla Express Court, Mumbai, 1951; 1.
29. Guyton & Hall, Textbook of medical physiology, 9th edition, A PRISM Indian edition, Bangalore, 1996; 9.
30. Clayton Thomas; Taber's Cyclopedic medical Dictionary, Edition, 1993; 17.
31. Sharma Prof. A. K. Kayachikitsa Part II, Published by Chaukhambha Orientalia, Varanasi, First Edition, 2007.
32. Bapalal Vaidhya, Nighantu Adarsa, Chaukhambha Bharati Academy- Varanasi, Reprint, 2005; 1.

33. Baghel Dr. M.S, Researches in Ayurveda, Published by Mridu Ayurvedic publications & Sales Jamnagar, second edition, 2005.
34. Dessai Ranjit Rai, Ayurvediya Kriya Sharira, Published by Vaidyanatha Prakashana, Nagpur, 1953; 1.