



Integrated Approach in Diabetes Management: A Statistical Study of Mudra Therapy and Medical Astrological Factors

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Abstract

Objective: The primary objective of this report is to examine, from an academic perspective, the clinical evidence of traditional Yoga Mudra Therapy in the management of Type 2 Diabetes Mellitus (T2DM)—a metabolic disorder—and the Medical Astrological Factors associated with this disease.

Methodology: Demographic statistical data regarding the burden of diabetes in Tamil Nadu were analyzed [1]. To explain the functional efficacy of mudras, the Pancha Bhuta (Five Elements) theory [3] and the Manipura Chakra-based mechanism [4] were utilized. Specifically, a Systematic Review of Clinical Trials [5] was studied to understand how Matangi and Rudra mudras contribute to diabetes control. Furthermore, astrological planetary combinations used to predict diabetes risk were evaluated [7].

Key Findings: The prevalence of diabetes among the general public in Tamil Nadu is 17.6% [2]. Integrated Yoga Mudra practices (TYM) statistically reduce Fasting Blood Glucose (FBG) levels by an average of 17.79 mg/dL and Glycosylated Hemoglobin (HbA1c) levels by 0.27% [5]. The Matangi Mudra balances the Psycho-Neuro-Endocrine pathways by stimulating the Manipura Chakra and influencing the Hypothalamus [4]. Astrologically, the affliction of planets like Jupiter and Venus by planets such as Saturn and Rahu indicates a risk of diabetes [3].

Conclusion: When combined with Yoga and Siddha medicine, Mudra Therapy serves as a cost-effective, drug-free, proven, integrated treatment protocol that improves glycemic control in diabetic patients. Knowledge of constitutional risk factors derived from Medical Astrology can be utilized for prevention and therapeutic management.

Keywords: *Diabetes Mellitus, Mudra Therapy, Medical Astrology, Pancha Bhuta Theory, Manipura Chakra, Glycaemic Control, Integrated Medicine, Tamil Nadu Health Burden.*

Introduction: Integrated Approach in Diabetes Management

Global and Tamil Nadu Health Burden of Diabetes

Diabetes Mellitus (DM), specifically Type 2 Diabetes Mellitus (T2DM), is a chronic metabolic disorder caused by insulin resistance or incomplete insulin secretion. This leads to chronic high blood sugar levels, causing several severe complications, including cardiovascular diseases [8]. According to the International Diabetes Federation (IDF) report, approximately 425 million people worldwide were affected by diabetes in 2017. This number is expected to rise to 629 million by 2045 [8].

In this global health burden, India's contribution is very significant. According to recent studies conducted in Tamil Nadu, the prevalence of diabetes among the studied population is recorded at 17.6% [2]. Notably, this prevalence is 27.5% among those aged 45-69, which is much higher than the 9.6% found in the 18-44 age group [2]. These data indicate that diabetes is a serious health challenge among the elderly group in Tamil Nadu. Furthermore, a prevalence of 5.99% even in rural communities shows that the disease is spreading beyond urbanization due to rapid lifestyle changes [1].

Regarding risk factors, obesity (Overweight) plays a major role. Among diabetic patients, 17.24% are obese with a Body Mass Index (BMI) ≥ 30 , which is nearly double the obesity rate in the general population [1]. It has been found that 56% of diabetic patients have a high diabetes risk score (>60 IDRS), which is statistically significant ($P < 0.05$) [1]. Poor dietary habits, lack of physical activity, and psychological stress act as key factors for the onset and severity of diabetes [3].

Diabetes Treatment in AYUSH Systems and the Tradition of Mudras

To reduce this health burden, studies are necessary on integrating traditional Indian medical systems (AYUSH - Ayurveda, Yoga, Unani, Siddha, and Homeopathy) with established treatment methods like diet control and exercise [8]. Yoga, with an Indian tradition of over 5,000 years, provides balance and harmony to the body, mind, and emotions. Yoga practice is beneficial in the management of many lifestyle diseases, including diabetes [8]. Mudras are traditionally considered one of the 64 arts [3]. The methods of performing mudras are simple; there are no dietary restrictions or side effects to learning and practicing them. Moreover, they are not contrary to any existing treatment method. Mudras distribute energy evenly within the body daily, providing necessary energy to affected organs and increasing immunity. This study substantiates traditional claims of mudra therapy by linking them with modern medical and astrological theories.

Research Objectives and Structure

The objectives of this research paper are as follows:

1. To explain the physiological mechanism of Mudra Therapy in the management of diabetes through its fundamental philosophies: the Pancha Bhuta theory and Chakras.
2. To demonstrate the clinical efficacy of an integrated Mudra Therapy protocol on glycemic control (FBG, HbA1c) with statistical data.
3. To analyze the inherent risk factors for diabetes based on Medical Astrological principles and discuss their importance in preventive medicine.

Traditional Physiological Theories and Pathology

Prameham (Diabetes) and Disease Factors in Siddha/Yoga Medicine

According to traditional medical systems, everyone born as a human is susceptible to some disease. There are fundamental factors for the occurrence of Diabetes (Prameham). Wrong dietary habits, irregular lifestyle, accumulation of waste in the body, blockages in blood and air circulation, and negative thoughts act as primary causes for the disease [3]. Treatments are undertaken to cure the disease and prevent it in the future. In ancient times, health was maintained through simple acts like nutritious food, fasting, rest, exercise, and meditation [3]. Health is a state where the body and mind function in unison.

Pancha Bhuta Theory and Balancing through Mudras

In traditional Indian medical systems (Siddha/Yoga), the body is considered a combination of the Pancha Bhutas (Five Elements: Earth, Water, Fire, Air, Ether) [9]. The fingers represent these five elements [3]:

- **Thumb:** Fire (Agni)
- **Index Finger:** Air (Vayu)
- **Middle Finger:** Ether (Space)
- **Ring Finger:** Earth (Prithvi)
- **Little Finger:** Water (Apas)

Mudras involve balancing the ratio of these five elements in the body by joining these finger tips. For example, digestive disorders and metabolic disorders (diabetes) are often caused by a deficiency of Agni (Fire) or an increase in Kapha (Water and Earth). Balancing the energies of Fire and Earth through mudras improves pancreatic function.

As a unique theory, source texts mention that the thumb and index finger have the power to attract 'Metal Power' [3]. Mudras bring out the energy latent within our invisible Subtle Body to activate body organs. This activity of attracting subtle body energy not only brings out the Prana (vital force) hidden within our body but also prevents the unnecessary waste of energy from the body [3]. Those suffering from diabetes lose body energy due to metabolic inefficiency caused by insulin resistance. The energy conservation obtained through mudras increases metabolic efficiency and helps improve insulin sensitivity.

Manipura Chakra, Pancreas, and Endocrine Integration

According to Yoga medicine, the liver and pancreas are critical organs to be attended to for diabetes [3]. The pancreas is located in the abdominal region, the energy production center of our body. This abdominal region is linked to the Manipura Chakra in Yoga theory [4].

Among the mudras recommended for diabetes, the **Matangi Mudra** [3] is very powerful. The Matangi Mudra opens and balances the Manipura Chakra. Consequently, one gains the ability to fully digest and assimilate life experiences [4]. Importantly, the Matangi Mudra directly affects the Hypothalamus. The Hypothalamus acts as the primary control center of the Autonomic Nervous System [4].

It is proven that the severity of diabetes is worsened by chronic stress. Stress stimulates Cortisol secretion, increasing insulin resistance. Matangi Mudra, by controlling the HPA Axis (Hypothalamic-Pituitary-Adrenal Axis) via the Hypothalamus, improves mental peace [3]. This is considered a key Physiological Mechanism for normalizing pancreatic function (insulin secretion) and bringing blood sugar levels under control.

Astrological Diabetes Predictions

Identifying Disease Risk through Astrology

Astrology helps predict in advance which diseases a person might be susceptible to at birth. Through this, preventive and precautionary measures can be taken before the disease becomes severe [10]. Since diabetes is related to metabolism, the influence of planets ruling glands and fluid states is observed here.

Some Astrological Combinations for Diabetes:

- **Affliction of Jupiter:** Lord Jupiter is generally considered the significator (Karaka) of glands and metabolism. If Jupiter is weak, retrograde, or afflicted by Saturn (the significator of chronic disease) or Rahu (obstructions), the risk of diabetes increases [7].
- **Affliction of Venus and Moon:** Venus is the planet controlling kidneys and fluidity. The Moon indicates the water level in the body. When Venus or Moon in watery signs (Cancer, Scorpio, Pisces) are afflicted by Fiery Planets like Mars or the Sun, there is a chance of diabetes occurring [7].
- **Bhava (House) Connections:** A strong malefic planet in the Ascendant (Lagna) with Venus and Jupiter being afflicted, or an exchange (Parivartana) or connection between the 6th Lord in the 8th House and the 8th Lord in the 6th House can create diabetes. Since the 6th House controls the kidneys and Libra rules the kidneys, these formations gain importance [7].

Example Horoscope Analysis

Analyzing the example horoscope provided in the source study (Date of Birth: 30.11.1972, 21:48, Dindigul) confirms astrological theories [3]. In the horoscope chart (Rasi), Saturn is exalted (in Taurus) and is conjoined with Rahu (in Capricorn) along with Jupiter [3]. The native developed diabetes during the Jupiter Mahadasha (major period) and Saturn Bhukti (sub-period) [3]. This confirms the astrological theory that the disease manifested when the sub-period of Saturn (significator of chronic disease) ran during the major period of Jupiter, while Jupiter was already afflicted by Rahu.

Astrology-Preventive Therapy Connection:

Astrological analysis points out the individual's inherent physiological weakness. To address this weakness, the native followed an integrated treatment protocol using mudras (Rudra, Matangi, Musti, Ganesha, Ushas, Prana mudras) [3]. The result that diabetes came under control provides empirical data that planetary deficiencies indicated by astrology can be successfully balanced through traditional AYUSH treatments like mudras.

Preventive Astrological Measures

For high-risk individuals or diabetic patients, certain methods are recommended to reduce planetary afflictions. It is recommended that those with weak Jupiter chant the mantra "Om Gram Greem Groum Sah Gurave Namah" 108 times on Thursdays, and those with weak Venus chant "Om Shum Shukraya Namah" 108 times on Fridays [7]. These spiritual remedies provide psychological strength and positive thinking, standing as support to the mental peace attained through mudras.

Mudra Therapy: Procedures and Techniques

Mudras are tantric methods that circulate Prana energy within the body through hand configurations. When practicing mudras, one should sit in asanas like Padmasana, Vajrasana, or Sukhasana so that the spine, neck, and head are in a straight line [3]. Before doing mudras, it is essential to eat easily digestible fibrous foods and avoid salt, tamarind, spicity, and fatty foods [3].

There is a deep connection between mudras and breathing exercises. When doing mudras, it is special to inhale (Purakam) and exhale (Rechakam) breath slowly, fully, and calmly. Specifically, keeping the exhalation time longer than the inhalation time is excellent for a healthy life [3].

Evidence-Based Mudras for Diabetes and Procedure Description

Although there are many mudras for diabetes management, mudras that primarily stimulate the Manipura Chakra are recommended [3]:

1. Matangi Mudra

- **Procedure:** Clasp both hands and fold the fingers. Lift only the middle fingers and hold them together. The left little finger should be on the outside.
- **Duration:** Practice for about 10 minutes, three times daily.
- **Benefits:** Blood sugar levels balance. Mental stress (tension) reduces [3]. Physiologically, it regulates pancreatic function by controlling the mind-body axis through influencing the Hypothalamus [4].

2. Rudra Mudra

- **Procedure:** Join the tips of the thumb, index finger, and ring finger together; the other two fingers should be straight.
- **Duration:** About 5 minutes, 2 times daily with both hands.
- **Benefits:** Stomach disorders are cured. The Manipura is stimulated, strengthening the stomach, pancreas, and spleen [3]. This mudra balances the energies of Fire (Thumb), Air (Index finger), and Earth (Ring finger) among the five elements.

3. Musti Mudra

- **Procedure:** Fold the fingers well to touch the palm and press the thumb over the ring finger.
- **Benefits:** Liver and gallbladder are stimulated, digestion occurs well, and the stomach remains calm. Self-confidence increases and fear reduces [3]. It supports excellent digestion.

Acupressure and Adjunct Therapies

Along with mudras, Acupressure therapy is also recommended for diabetes. Pressing well 10 times on the line one inch below the junction of the ring finger and middle finger on the left palm helps in diabetes control [3].

Mudra therapy is part of a holistic Integrated Protocol containing practices like Yogasana, Kriyasana, Pranayama, Bandhas, and Acupressure [3]. Clinical studies confirm that Comprehensive Yogic Breathing Programs (TYM) yield significantly positive effects on FBG and HbA1c levels compared to individual mudra practice [5]. Therefore, mudra exercises for diabetes must be implemented in conjunction with Pranayama and Meditation (e.g., bringing deep peace through Jnana Mudra).

Data Analysis and Results (Statistical View)

Analyzing regional and clinical statistical data is essential to estimate the social burden of diabetes and demonstrate the efficacy of traditional treatments like mudras.

Assessment of Diabetes Prevalence and Risk Factors in Tamil Nadu

Statistics regarding regional health burden obtained through studies on diabetes prevalence in Tamil Nadu are summarized in the following table.

Prevalence and Risk Factors of Diabetes in Tamil Nadu (Subjective Details)

Measure	Details	Statistical Significance	Source
General Diabetes Prevalence (Total)	\$17.6\%\$ (95% CI: \$16.1\%\$–\$19.2\%\$)	-	[2]
High Body Mass Index (BMI > 30)	\$17.24\%\$ in Diabetics	Double that of general public	[1]
High Diabetes Risk Score (>60 IDRS)	\$56\%\$ in Diabetics	\$P<0.05\$	[1]
High Average Fasting Glucose	\$124.6\$ mg/dl for ages 45–69	Higher than ages 18–44	[2]

These statistics prove that diabetes prevalence has a strong correlation with established risk factors like age and obesity. Specifically, more than half of diabetic patients having a high-risk score indicates the need for proper lifestyle modification and treatment [1].

Compilation of Clinical Studies on Glycemic Control of Yoga/Mudra Therapy

Systematic reviews prove that Yoga therapy produces significant effects in improving glycemic control and other health factors in diabetic patients [12]. Data obtained by assessing the effects of a specific Traditional Yogic Mudra (TYM) intervention are summarized below.

Impact of Yoga/Mudra Therapy on Glycemic Control (Compilation of Systematic Studies)

Glycemic Factor	Treatment Method	Pre-treatment Average	Change / Effect	Statistical Significance (P- value)	Source
FBG	Integrated Yoga Mudra (TYM)	\$108.79\$ mg/dL	\$17.79\$ mg/dL reduction	\$P < 0.001\$	[5]
HbA1c	Integrated Yoga Mudra (TYM)	\$6.00 \%\$	\$0.27 \%\$ reduction	\$P < 0.001\$	[5]
FBG	Yoga (Compared to Walking)	Group -	\$12.07\$ mg/dL additional reduction	\$P < 0.05\$	[14]
FBG, PPBS, HbA1c	Integrated Siddha and Yoga	-	Significant reduction from baseline	\$P < 0.001\$	[6]

The results of these studies demonstrate that integrated yoga mudra therapy improves glycemic control both statistically and clinically. Specifically, in a certain study, FBG decreased by \$17.79\$ mg/dL and HbA1c by \$0.27 \%\$ in the mudra intervention group [5]. In the analysis, even after eliminating the impact of dietary habits, it was confirmed that these improvements were primarily caused by mudra therapy (\$F = 21.10\$, \$P < 0.001\$ for FBG; \$F = 13.63\$, \$P = 0.001\$ for HbA1c) [5]. These results indicate that mudras directly restore the body's internal hormonal balance beyond external factors like diet control.

Physiological Benefits of Key Mudras for Diabetes Management

Key mudras for diabetes management and their functional philosophies are described in the following table.

Key Mudras for Diabetes Management and Their Benefits

S.No.	Mudra	Key Benefits (Diabetes Related)	Physiological Connection (Yoga Theory)	Source
1.	Matangi Mudra	Blood sugar level balance, stress reduction	Manipura Chakra stimulation, Endocrine balance via Hypothalamus	[3]
2.	Rudra Mudra	Strengthening Pancreas and Spleen, Control of intestinal disorders	Manipura stimulation, Balance of Fire and Earth (Metabolism)	[3]
3.	Musti Mudra	Liver and Gallbladder promotion, Digestion improvement	Digestive system function, Detoxification	[3]
4.	Jnana Mudra	Deep sleep, Mental peace, Reduction of anger	Meditative state, Stress factor reduction (Cortisol Reduction)	[3]

Discussion

Mudra Therapy: Scientific Concurrence and Mechanisms

Mudra therapy is a subtle part of Yoga practice; its benefits do not stop with just meditation benefits. Yoga benefits diabetes management through Psycho-Neuro-Endocrine and immune processes [8]. Mudras directly perform this axis function by regulating Prana flow in the body via finger tips.

Matangi Mudra stabilizes pancreatic function by affecting the Hypothalamus, and Rudra Mudra by stimulating the Manipura Chakra [3]. This activity is comparable to improving Insulin Sensitivity and increasing glucose absorption in modern medicine [5].

Mudras prevent unnecessary waste of energy from the body [3]. In diabetic patients, body fatigue and energy loss due to metabolic inefficiency caused by insulin resistance are common. When Prana energy is conserved and distributed evenly within the body through mudras, the body's metabolic efficiency is enhanced. This is a functional technique of significance in T2DM management.

Astrological Factor and Its Importance in Disease Prevention

The approach of Medical Astrology offers an additional dimension to assess the 'Constitutional Risk' of lifestyle diseases like diabetes. Specific combinations of planets Jupiter (Metabolism) and Saturn (Chronic nature) indicate a deep, hereditary risk for the disease [7].

In integrated medicine, high-risk individuals can be identified at an early stage through this astrological analysis. For example, like the native in the horoscope who developed diabetes during the Jupiter Dasha and Saturn Bhukti, individuals with planetary afflictions can be identified and encouraged to undertake mudra therapy, pranayama, and dietary changes before the disease manifests [3]. This preventive approach can help significantly reduce the severity and chronic nature of the disease. The controlled disease state of the example horoscope proves that traditional astrological wisdom can be used as a modern preventive medical tool.

Future of Multifaceted Integrated Medicine

Integrated treatment protocols have recorded significant success in diabetes management. In studies combining Yoga and Siddha medicine, statistically excellent reductions were seen in Fasting Blood Sugar, Post-Prandial Blood Sugar (PPBS), and HbA1c levels [6]. Furthermore, Yoga and Naturopathy methods improve other diabetes-related risk factors such as blood pressure (Systolic BP: Reduced from 140 mm Hg to 120 mm Hg), Body Mass Index (BMI: Reduced from 27.7 to 24.2 kg/m²), and quality of life [15]. This emphasizes that AYUSH approaches like mudra therapy offer a holistic solution handling the multifaceted nature of diabetes, not just individual glycemic control.

Conclusion

The integrated medical approach in diabetes management, specifically through mudra therapy, offers scientifically and traditionally proven benefits. Matangi and Rudra mudras, along with associated yoga practices, directly improve pancreatic function through the Pancha Bhuta theory and the function of the Manipura Chakra. Consequently, a statistically significant improvement is seen in FBG and HbA1c levels.

Furthermore, identifying an individual's constitutional risk using Medical Astrology paves the way for prevention and therapeutic management through traditional treatment (Mudra, Diet, Meditation). Yoga mudra practices are a cost-effective, safe, and proven adjunctive therapy. They provide a holistic and effective path to manage diabetes.

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