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ROLE OF MANAS IN METABOLIC DISORDERS W.S.R TO DYSLIPIDEMIA

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ABSTRACT
Prasanna Atma Indriya Manaha is considered as one of the entities of Swastha Purusha. Manas being the prime factor has its effect on Sharira even leading to Psycho-Somatic Disorders. Researches show that Psychological stress as one of the prime factors leading to increasing levels of total cholesterol, LDL-cholesterol, triglycerides, and free fatty acids, while potentially decreasing HDL-cholesterol. Manasika Bhava has direct impact on the Agni thereby paying off to metabolic diseases such as Diabetes, Dyslipidemia and Obesity. **Aim/ Objective:** To evaluate the effect of Manas on Metabolic Disorders w.s.r to Dyslipidemia. **Materials and Methods:** Literary review of Samhitas and Modern Text Books along with the research articles to establish the effect of Manas on the metabolic disorders. Access the stress factor of about 50 Dyslipidemia patients using perceived stress scale. Results and **Conclusion:** Results show that Manasika Bhavas having negative impact just like stress have direct effect on the body leading to metabolic disorders. Thus, psychotherapy like stress management also have a major role in prevention and management of Metabolic Diseases such as Dyslipidemia.

KEYWORDS: Manas, Dyslipidemia, Stress, Metabolic Disorders.

INTRODUCTION

Manasika Bhavas are the psychological and emotional states of an individual that originate in Manas (mind) and influence behaviour, health, and disease. These states are not just fleeting feelings but dynamic psycho-physiological phenomena that manifest outwardly (e.g., through laughter or tears) and inwardly (e.g., via stress responses). Thus, they play a vital role in both Swasthaya Rakshana (maintenance of health) and Roga Utpatti (pathogenesis).

The 22 Manasika Bhavas are Kama – Desire, Krodha – Anger, Lobha – Greed, Moha – Delusion, Mada – Pride / Intoxication, Matsarya – Jealousy, Bhaya – Fear, Shoka – Grief, Chinta – Anxiety / Worry, Harṣha – Joy, Irṣhya– Envy, Aarati – Dissatisfaction / Displeasure, Tandra – Drowsiness, Nidra – Sleep, Swapna – Dreams, Kṣhudha– Hunger, Pipasa – Thirst, Utsaha – Enthusiasm, Smṛiti – Memory, Dhairya – Courage / Patience, Buddhi – Intellect, Sukha–Duḥkha – Pleasure & Pain.[1]

These Bhavas of Manas can be divided into Dukha and Sukhakara Bhavas. Balanced positive bhavas promote mental clarity, emotional stability, and overall well-being; imbalanced negative ones can trigger or worsen physical and psychological disorders.[2]

Negative Bhavas such as Krodha (anger), Shoka (grief), Bhaya (fear), Chinta (anxiety), Moha (delusion), Irṣya (jealousy), Lobha (greed), Dweṣha (hatred) vitiate Doṣas, especially Vata and Pitta Doshas.[3]

Manasika Bhavas and their effect on body.[4,5,6]

Table 1: Effect of Mansika Bhavas on Body.

Manasika Bhāva	Doṣa Affected	Bodily Impact
Krodha	Pitta ↑	Hyperacidity, hypertension, inflammatory disorders
Shoka	Vāta ↑	Weight loss, insomnia, weakness
Bhaya	Vāta ↑	Tremors, palpitations, IBS
Chinta	Vāta ↑	Digestive disturbances, anxiety
Moha	Kapha ↑	Lethargy, metabolic disorders

Table 2: Probable co-relation of effect of Negative Manasika Bhavas in Modern Science.

Ayurveda Concept	Modern Equivalent
Rajas–Tamas prakopa	Chronic stress response
Agnidushti	Altered metabolism
Ojakshaya	Immune suppression
Mano-Sharira roga	Psychosomatic disorders
Praṇa Vata dushti	Autonomic imbalance

Negative Manasika Bhavas act as psychological stressors that activate the stress response; Ayurveda explains this through Rajas–Tamas prakopa, Vata–Pitta dushti, Agnidushti and Ojakshaya, while modern science explains it via HPA axis activation, autonomic imbalance, and immune suppression.

Thus, stress assessment parameter was taken to assess the effect of Manasika Bhavas in case of Metabolic Disorders w.s.r to Dyslipidemia.

METHODS

Literary review of Samhitas and Modern Text Books along with the research articles to establish the effect of Manasika Bhava with reference to stress on the metabolic disorders w.s.r to Dyslipidemia.

Assessment of the stress factor of about 50 Dyslipidemia patients were done using perceived Perceived Stress Scale having a set of 10 questionnaire which can be scored from 0 to 40

Scores ranging from 0-13 would be considered low stress.

Scores ranging from 14-26 would be considered moderate stress.

Scores ranging from 27-40 would be considered high perceived stress.[7]

OBSERVATIONS AND RESULTS

Table 3: Observation on various parameters.

Parameter	Category	Value
Age	20-30 years	02
	31-40 years	21
	41-50 years	20
	51-60 years	07
Gender	Female	25
	Male	25
Marital status	Married	44
	Unmarried	06
Socio-economic Status	Upper Middle Class	33
	Middle class	12
	Lower Middle Class	05
Habitat	Rural	26
	Urban	24
Employment Status	Employed	31
	Unemployed/ Student/ Retired/ House wife	19

Age-wise Distribution

The majority of participants belonged to the 31–40 years age group (21 subjects), followed closely by the 41–50 years group (20 subjects). Only 2 participants were in the 20–30 years age group, while 7 participants belonged to the 51–60 years category. This indicates that most study subjects were middle-aged adults, an age group commonly associated with lifestyle-related disorders.

Gender Distribution

The study population showed an equal distribution of gender with 25 males and 25 females, ensuring gender balance and minimizing gender-related bias in the study outcomes.

Marital Status

A large proportion of participants were married (44 subjects), while only 6 participants were unmarried. This

suggests that the majority of the study population belonged to a stable family and social structure.

Socio-economic Status
Most participants belonged to the Upper Middle Class (33 subjects). The Middle Class constituted 12 participants, while 5 participants were from the Lower Middle Class. This reflects a predominance of individuals from relatively better socio-economic backgrounds.

Habitat
Regarding habitat, 26 participants were from rural areas, while 24 participants belonged to urban areas, indicating a nearly equal rural–urban representation in the study population.

Employment Status
Out of 50 participants, 31 were employed, whereas 19 participants were categorized as unemployed/students/retired/housewives. This shows that a majority of the participants were actively engaged in employment, which may have implications for lifestyle and stress-related factors.

Table 4: Observation on various parameters.

Parameter	Category	Value
Agni	Sama	12
	Vishama	18
	Teekshna	01
	Manda	19
Diet	Vegetarian	09
	Non-Vegetarian	40
	Eggetarian	01
Sleep	Regular	30
	Irregular	20
BMI	<18kg/m^2	00
	18-25kg/m^2	14
	>25 kg/m^2	36
Life Style	Sedentary	05
	Moderately Active	41
	Highly Active	04
Metabolic Disorder	Diabetes Mellitus	12
	Hypertension	09
	Hypothyroidism	06

Agni Status
Assessment of Agni revealed that the majority of participants had Manda Agni (19 subjects) and Vishama Agni (18 subjects). Only 12 participants exhibited Sama Agni, while Teekshna Agni was observed in 1 subject. This indicates a predominance of Agnidushti, particularly Manda and Vishama Agni, which is commonly associated with metabolic and lifestyle-related disorders.

Dietary Pattern
Most participants followed a non-vegetarian diet (40 subjects). A smaller proportion were vegetarian (9 subjects), and only 1 subject followed an eggetarian diet. This dietary pattern suggests a higher intake of mixed diets, which may influence metabolism and disease progression.

Sleep Pattern
Regarding sleep habits, 30 participants reported regular sleep, while 20 participants had irregular sleep patterns. The presence of irregular sleep in a significant proportion of subjects indicates potential circadian rhythm disturbance, which is known to affect metabolic and mental health.

Body Mass Index (BMI)
None of the participants were underweight (BMI <18 kg/m²). Fourteen participants had a normal BMI (18–25 kg/m²), whereas a majority, 36 participants, had a BMI >25 kg/m², indicating a high prevalence of overweight and obesity among the study population.

Lifestyle Pattern
Most participants were moderately active (41 subjects). A smaller number were sedentary (5 subjects), while 4 participants reported a highly active lifestyle. Although the majority were moderately active, the high prevalence of increased BMI suggests that physical activity alone may not be sufficient to counter balance dietary and metabolic factors.

Associated Metabolic Disorders
Among the participants, 12 subjects were diagnosed with Diabetes Mellitus, 9 subjects had Hypertension, and 6 subjects had Hypothyroidism. The presence of these

metabolic disorders indicates a significant burden of metabolic dysregulation in the study population.

Table 5: Observation on Lipid Profile Status.

Lipid Profile Status	Category	Value
Total Cholesterol	<200mg/dl	26
	200-239mg/dl	17
	>240mg/dl	07
LDL	<100mg/dl	10
	100-129mg/dl	20
	130-159mg/dl	11
	160-189mg/dl	03
	>190mg/dl	06
Triglycerides	<150mg/dl	07
	150-199mg/dl	13
	200-499mg/dl	24
	>500mg/dl	06
HDL	<40mg/dl	23
	40-60mg/dl	26
	>60mg/dl	01
VLDL	<30mg/dl	10
	>30mg/dl	40

Total Cholesterol

Assessment of total cholesterol levels showed that 26 participants had values within the normal range (<200 mg/dl). Seventeen participants were in the borderline high range (200–239 mg/dl), while 7 participants had high total cholesterol (>240 mg/dl). This indicates that nearly half of the study population exhibited borderline to high cholesterol levels, suggesting an increased cardiovascular risk.

Low-Density Lipoprotein (LDL)

LDL cholesterol analysis revealed that only 10 participants had optimal levels (<100 mg/dl). The majority showed elevated LDL levels, with 20 participants in the near-optimal range (100–129 mg/dl) and 11 participants in the borderline high range (130–159 mg/dl). Additionally, 9 participants had high to very high LDL levels (≥160 mg/dl). This highlights a significant prevalence of atherogenic lipid abnormalities among the subjects.

Triglycerides

Triglyceride levels were markedly raised in a majority of participants. Only 7 participants had normal triglyceride levels (<150 mg/dl). Thirteen participants were in the borderline high range (150–199 mg/dl), while a substantial number, 24 participants, had high triglyceride levels (200–499 mg/dl). Six participants exhibited very high triglyceride levels (>500 mg/dl), indicating severe dyslipidemia in a notable proportion of the study population.

High-Density Lipoprotein (HDL)

Evaluation of HDL cholesterol showed that 23 participants had low HDL levels (<40 mg/dl), which is considered a cardiovascular risk factor. Twenty-six participants had normal HDL levels (40–60 mg/dl), while only 1 participant had protective HDL levels (>60 mg/dl). This reflects a high prevalence of low or suboptimal HDL cholesterol among the study subjects.

Very Low-Density Lipoprotein (VLDL)

VLDL levels were elevated in a majority of participants, with 40 subjects showing VLDL >30 mg/dl, while only 10 participants had values within the normal range. Elevated VLDL further supports the presence of hypertriglyceridemia and disturbed lipid metabolism.

Table 6: Observation on Stress Level.

Stress level assessed through PSS	Number of Subjects
High	8
Moderate	37
Minimal	5

Stress levels among the study participants were assessed using the Perceived Stress Scale (PSS). Out of the total 50 subjects, 37 participants exhibited moderate stress levels, indicating that the majority of the study population was experiencing a sustained level of psychological stress. High stress levels were observed in 8 participants, reflecting a smaller yet clinically significant subgroup with pronounced stress burden. Only 5 participants demonstrated minimal stress,

suggesting limited representation of psychologically resilient individuals in the study population. Stress-induced catecholamine release also promotes lipolysis in adipose tissue, increasing circulating free fatty acids. These free fatty acids are taken up by the liver and re-esterified into triglycerides, further aggravating hypertriglyceridemia and contributing to increased LDL levels. Additionally, chronic stress has been associated with reduced activity of lipoprotein lipase, impairing triglyceride clearance from circulation.

Results interpretation

The study population predominantly consisted of middle-aged individuals, with equal gender distribution. A significant proportion exhibited Agnidushti, predominantly Manda and Vishama Agni, along with overweight/obesity and associated metabolic disorders such as diabetes mellitus, hypertension, and hypothyroidism.

Lipid profile analysis revealed a high prevalence of hypertriglyceridemia, elevated LDL and VLDL, and low HDL, confirming dyslipidemia.

Stress assessment showed that 74% of participants experienced moderate stress, while 16% exhibited high stress, indicating sustained psychological stress in the majority of patients.

DISCUSSION

Continuous exposure to stressors such as Chinta, Bhaya, Krodha, and Shoka acts as Manasika Nidana, leading to Rajas and Tamas Prakopa, which disturbs mental equilibrium and initiates disease processes.[8] Mental stress predominantly aggravates Vata and Pitta Doshas, initially affecting Prana Vata, followed by Samana Vata and Pachaka Pitta, which are central to digestion and metabolism.[9] Vitiation of these Doshas results in Agnimandya or Vishama Agni, leading to improper digestion and metabolism.[10]

Impaired Agni causes formation of Ama, which circulates systemically and vitiates Rasa Dhatu, followed by Meda Dhatu, producing abnormal lipid metabolism.[11]

The obstruction of Rasavaha and Medovaha Srotas due to Ama and vitiated Meda leads to accumulation of Abaddha Medas, corresponding to circulating lipids in modern science.[12] Clinically, this manifests as Medoroga.[13] comparable to dyslipidemia. Thus, stress acts as a triggering and perpetuating factor in dyslipidemia through both Ayurvedic samprapti and modern stress physiology.

Direct Effect of Psychological Stress on Lipid Profile

Psychological stress exerts a direct influence on lipid metabolism through neuroendocrine mechanisms. Chronic stress activates the hypothalamic–pituitary–adrenal (HPA) axis and the sympathetic nervous system, leading to increased secretion of cortisol and catecholamines. Elevated cortisol levels stimulate hepatic gluconeogenesis and lipogenesis, resulting in increased synthesis of triglycerides and very low-density lipoproteins (VLDL). This mechanism may explain the markedly elevated triglyceride and VLDL levels observed in a majority of participants.

Low HDL levels observed in a substantial proportion of subjects may also be partly attributable to stress-related metabolic alterations. Stress has been shown to reduce reverse cholesterol transport and impair HDL-mediated cardioprotective mechanisms, thereby increasing cardiovascular risk.

Indirect Effect of Stress via Behavioural and Lifestyle Factors

Apart from its direct biochemical effects, stress indirectly influences lipid metabolism by altering lifestyle behaviours. Individuals experiencing sustained stress often adopt unhealthy dietary habits, including increased intake of calorie-dense, fatty, and sugary foods. Stress is also associated with physical inactivity, disturbed sleep patterns, and increased consumption of tobacco or alcohol, all of which are known contributors to dyslipidemia.

In the present study, the predominance of moderate stress levels suggests a chronic stress exposure rather than acute stress, which may have gradually influenced lifestyle patterns and metabolic regulation, thereby worsening lipid abnormalities over time.

Combined and Synergistic Effects

The mix of stress and metabolic problems can make lipid metabolism worse. Stress can make insulin resistance worse blood pressure harder to control and affect thyroid function. This can indirectly make dyslipidemia worse. This two-way relationship shows that stress is not a risk factor on its own but also makes the metabolic problems linked to chronic diseases worse.

From a viewpoint ongoing stress like worry, fear and anger can cause an imbalance in Vata and Pitta. This imbalance can weaken the fire or Agni and result in the improper metabolism of Meda Dhatu. This can show up as Medo Dushti, which's similar to dyslipidemia. If there are metabolic problems it means there are many Doshas and Srotorodha highlighting that lipid abnormalities have many causes.

CONCLUSION

The present study highlights the significant role of Manas in the pathogenesis of metabolic disorders, particularly dyslipidemia. Negative Manasika Bhavas, especially chronic stress, initiate a cascade of Vata-Pitta Prakopa, Agnidushti, Ama formation, Meda Dhatu

Vikriti, and Srotorodha, ultimately resulting in Medoroga.

The predominance of moderate to high stress levels among dyslipidemia patients underscores the necessity of incorporating stress assessment and management strategies in the prevention and treatment of metabolic disorders. An integrative approach addressing both Manas and Sharira is essential for effective management of dyslipidemia.

Overall this study suggests that dyslipidemia in the people studied is not just because of metabolic problems. It is the result of a mix of psychological stress changes in neuroendocrine factors, lifestyle factors and systemic metabolic dysfunction. To effectively manage dyslipidemia it is essential to address stress along, with metabolic health issues.

Declaration
Conflict of interest: None.

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