

AN ETIOPATHOLOGICAL STUDY OF STHAULYA ROGA WITH SPECIAL  
REFERENCE TO OBESITY AND ITS UPASHAYATAMAKA PARIKSHANA WITH  
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## ABSTRACT

*Ayurveda*, an ancient holistic healing system originating from India, focuses on achieving harmony between the body, mind, and spirit to maintain and restore optimal health. Central to this practice is the concept of balancing the three *doshas*—*Vata*, *Pitta*, and *Kapha*—which represent different bodily energies and govern various physiological functions. *Ayurveda* emphasizes personalized care, recommending specific diets, lifestyle practices, herbal remedies, and therapeutic treatments tailored to each individual's unique constitution. By restoring *dosha* balance, *Ayurveda* seeks not only to prevent illness but also to promote long-term wellness, vitality, and overall well-being. Its approach integrates physical, mental, and spiritual practices for comprehensive health care. *Acharya Sushruta* and *Acharya Charaka* highlighted the importance of maintaining a balanced and healthy body to achieve the four ultimate goals of life, known as *Chaturvidha Purushartha* (*Dharma*, *Artha*, *Kama*, and *Moksha*). *Acharya Sushruta* emphasized that a balanced, moderate body (*Madhyama Sharira*) is ideal for overall health, whereas an excessively obese (*Ati Sthoola*) or excessively thin (*Ati Krishna*) body tends to experience frequent health issues. This balance in physical constitution is seen as crucial for leading a healthy, fulfilling life and achieving higher spiritual and material goals. Obesity arises from a complex interplay of environmental, genetic, and lifestyle factors. Poor dietary habits, lack of physical activity, and genetic predispositions contribute significantly to weight gain. Additionally, socioeconomic conditions and cultural norms also play key roles in shaping behaviors that can lead to obesity, making it a multifaceted health issue. *Acharya Charaka*, in *Charaka Samhita Sutrasthana* (*ch. su. 23*), identified diseases caused by over-nourishment (*Samtarpana-Janita roga*), and in *Charaka Samhita Sutrasthana* (*ch. su. 21*), he ranked obesity (*Sthaulya Roga*) among the eight most undesirable diseases. In *Charaka Samhita Sutrasthana* (*ch. su. 15/37*), the signs and symptoms of obesity are described as including loss of libido, profuse sweating, increased appetite, fatigue, foul body odor, and excessive thirst. Body Mass Index (BMI) is categorized into distinct ranges: a normal BMI is between 18.5 and 24.9, indicating a healthy weight. Overweight, or *Sthaulya*, is classified with a BMI from 25.0 to 29.9. Obesity, known as *Ati-Sthaulya*, falls within the 30 to 39.9 range, while extreme obesity is identified with a BMI over 40. These classifications help assess an individual's risk for obesity-related health issues. A lipid profile typically reveals elevated levels of high-density lipoprotein (HDL), low-density lipoprotein (LDL), and triglycerides (TG). In *Ayurveda*, the body's balance is maintained through *Sharir Dosh*, *Dhatu*, and *Mala. Meda*, one of the seven *Dhatu*s, represents fat tissue, playing a crucial role in regulating body temperature and maintaining physical structure. It supports the skeletal system and is essential for sustaining life by providing the necessary cushioning and energy reserves. Taking 500 mg of *Dashanga Guggulu* twice daily with Lukewarm water has been shown to positively impact *Sthaulya Roga* (obesity). This *Ayurvedic* formulation aids in reducing excess fat by enhancing metabolism and promoting fat breakdown. Its detoxifying properties help eliminate toxins (*Ama*) that contribute to weight gain, while also balancing the body's *Doshas*, particularly *Kapha*, which is associated with fat accumulation. Regular use can lead to improved weight management and overall health.

**KEYWORDS:** *Ayurveda* ancient holistic healing system, balancing the three *doshas*, specific diets, lifestyle, *Chaturvidha Purushartha*, *Samtarpana-Janita roga*, sign and symptoms, BMI, lipid profile test, *Sharir*, *Dosh*, *Dhatu* and *Mala*, *Dashanga Guggulu*.

## INTRODUCTION

The achievement of a happy life is largely dependent on one's health. Globally, *Ayurveda* is the oldest medicinal science. It addresses the preventive, therapeutic, and basic aspects of health.

हिताहितं सुखं दुःखमायुस्तस्य हिताहितम् ।

मानं च तच्च यत्रोक्तमायुर्वेदः स उच्यते ॥ (च० सू० ३०)

*Ayurveda*'s definition therefore roughly translates as “the science of longevity” or “the sacred knowledge of life”. Today's population, however, is accustomed to a comfortable and opulent lifestyle, which contributes to a number of chronic and non-communicable diseases. The most common dietary disorder in affluent settings, primarily found in industrialised nations, is *sthaulya*.

WHO defines well health as a condition of whole physical, mental, social and spiritual well-being, not just the absence of sickness. It is the sole path to reach the ultimate objective among the *chaturvidha purushartha*, according to *Charaka* and *Sushruta*. *Acharya Sushruta* said that *Madhyama Sharira* is the best, *Ati Sthula* or *Ati Krisha Sharira* may always have issues. *Ayurveda's Santarpanjanya Vyadhi* explains *Sthaulya vyadhi*, and *Atisthoola purusha* is regarded as one of the *Asthanindita purushas*.

According to *Ayurveda*, the balance of *sharir Dosha*, *Dhatu*, and *Mala* preserves good health. These seven *Dhatus* are present in every human body in a specific ratio. A shift in their balance might result in a number of illnesses. One of these *Dhatus*, *Meda* or fat, has numerous functions, the most vital of which is to generate and sustain body heat, which is necessary for our survival. Additionally, *Meda* shields our bodies' fragile structures from harm and other hazards. *Meda* provides the skeletal frame work of our body, nervous and brain tissues with the required supports and gives our body the necessary form or shape and skill. The characteristics of a healthy body, according to *Acharya*, are well distributed muscle and adipose tissue as well as appropriately spaced buildup.

As *Acharya Charaka* lists *Sthaulya* among the eight most undesirable ailments (Ch. Su. 21) and *Samtarpanajanita Roga* (Ch. Su. 23), *Sthaulya* has been mentioned since the very beginning of *Ayurveda* in a number of *Samhitas*, *Sangraha Granthas*, and other texts. *Meda* (fat/lipid) and *Medodhatvagni Mandyata* are the primary factors in the pathogenesis of *Sthaulya*, along with *Kledaka Kapha*, *Samana* & *Vyana Vayu*.

सममांसप्रमाणस्तुसमसंहननोनरः ।

दृढेन्द्रियोविकारणानबलेनाभिमूयते ॥१८॥

क्षुत्पिपासातपसहःशीतव्यायामसंसहः ।

समपक्ता समजरः सममांसचयो मतः ॥१९॥

(Cha.Su. 21/18-19)

श्रेष्ठो मध्यशरीरस्तु कृशः स्थूलानु पूजितः ॥

(Su.Su. 15/38)

Being obese poses a serious risk to one's health and lifespan in addition to being a cosmetic issue. It's true what they say—the longer the belt, the shorter the life.

Both of these individuals—the fat and the emaciated—should always be scorned; an ideal physique is a middle one, with the emaciated being superior.

यदिहास्ति यदन्यत्र यन्नेहास्ति न तत्त्वचित् ॥

The material provided here contains all of the [medical knowledge] that is available elsewhere. Furthermore, you cannot find anything else here that isn't available.

Since ancient times, *Ayurveda* has been a well-established science of life and an effective means of treating illnesses in people. It also uses a holistic approach to identify illnesses and then provide a comprehensive therapy for the body and soul with the exclusive goal of obtaining a full recovery. It has incredible tools for both curative and preventive care.

Globally, the prevalence of obesity in children and adolescents quadrupled and more than doubled in adults between 1990 and 2022. In India, the percentage of people who are obese rose from 1.2% in 1990 to 9.8% in 2022 for women and from 0.5% to 5.4% in 2022 for males. In 2022, India's obesity prevalence ranked 182nd globally for women and 180th globally for men, according to a study carried out by the World Health Organization and the Network of Health Scientists NCD Risk Factor Collaboration. In modern medicine, obesity and *Sthaulya* are comparable. The abnormal expansion of adipose tissue, or obesity, is caused by either an increase in the size or quantity of fat cells, or both. In this state, the person becomes noticeably overweight because to the large accumulation of body fat beneath the skin and around specific organs including the abdomen, buttocks, breasts, and thighs. It falls within the *Atisthauilya* (Obsessive-Compulsive) category. Thus, *Sthaulya* is an excess buildup of *Medodhatu* and aberrant. *Sthaulya* is the term for an excessive rise in body weight caused by the body's muscles, bone, fat, and water content.

Obesity and being overweight are crucial risk factors for a range of chronic diseases, including cancer, diabetes, high blood pressure, stroke, coronary heart disease (CHD), and osteoarthritis. A set of risk factors known as metabolic syndrome increases the chance of developing cardiovascular diseases as well as other illnesses. Your heart receives oxygen-rich blood from the coronary arteries. A material called plaque blocks the coronary arteries, reducing blood flow and leading to heart failure if Body Mass Index (BMI) rises. In the same way, your chances of having high blood pressure are higher if you are *Sthaulya*.

A higher BMI is associated with an increased risk of stroke. The majority of obese and *Sthaulya* individuals have type 2 diabetes. Osteoarthritis affects the knee, hips,

and lower back frequently among *Sthaulya* people. Gallstones are more likely to occur in those with *Sthaulya*. Menstrual issues and infertility are potential concerns for women.

The most common cause of *Sthaulya* (obesity) is an imbalance in energy. Energy balance refers to the ratio of calories or energy obtained from food and beverages to the energy required by the body for functions such as respiration, digestion, and physical activity. You don't need to balance your daily energy intake and expenditure of calories in order to maintain a healthy weight. Your ability to maintain a healthy weight over time is dependent on your balance.

"*Shodhan Chikitsa*" is known to be beneficial in treating *Sthaulya Roga* in the *Ayurvedic* sector. "*Shaman Chikitsa*" is preferred when taking the patient's daily schedule and available time into account.

**Lifestyle Diseases' Core Concept:** Poor eating habits, physical inactivity, incorrect body posture, and a thrown-off biological clock are the main causes of lifestyle diseases. According to a study co-authored by the World Economic Forum and the World Health Organization, India's poor food and bad lifestyle will cost the country 236.6 billion by 2015. Non-communicable illnesses caused 35 million deaths worldwide in 2005, accounting for 40% of premature fatalities. About 80% of these deaths will take place in middle-income nations like India.

The Associated Chamber of Commerce and Industries (ASSOC-HAM) showed that 68% of working women between the ages of 21 and 52 reported having a lifestyle illness including obesity, depression, chronic back pain, diabetes mellitus, or hypertension. Although the idea of obesity has been around since antiquity, the present definition was approved barely ten years ago. Weight that surpassed the reference value's threshold was classified as overweight. The population's reference value was determined by observing the correlation between mortality and body weight. According to the World Health Organization, obesity is defined as: The definition of overweight and obesity is abnormal or excessive fat buildup that poses a health risk. The Body Mass Index (BMI), which is calculated by dividing a person's weight (in kilograms) by their height (in meters squared), is a rough population indicator of obesity. In general, someone is assumed obese if their BMI is thirty or more.

#### NEED OF THIS RESEARCH WORK

- Obesity is associated with increased mortality and substantial morbidity, placing a significant burden on healthcare systems around the world.
- Now a day's obesity is a major problem due to life style and fast going technology, over eating, fast food and junk food play an important role in obesity, that affects people of all age group.

- Heart disease and strokes Obesity makes you more likely to have high blood pressure and abnormal cholesterol levels, which are risk factors for heart disease and strokes.
- Digestive problems, Type 2 diabetes, Osteoarthritis, certain cancers, Sleep apnea.
- Anti-obesity drugs that were approved and marketed have now been withdrawn due to serious adverse effects and there is no permanent cure of obesity in modern medicine.
- High expectations from the Ayurvedic show in this area, Dashanga Guggulu has a low cost and without any side effects.
- Dashanga Guggulu has properties *Ushna*, *Rukchha*, *Kaphvathar*, *Medohar*, etc. If result is positive then it could be beneficial for the patient of *Sthaulya Roga*.
- Globally, the prevalence of obesity in children and adolescents quadrupled and more than doubled in adults between 1990 and 2022. In India, the percentage of people who are obese rose from 1.2% in 1990 to 9.8% in 2022 for women and from 0.5% to 5.4% in 2022 for males.
- In 2022, India's obesity prevalence ranked 182nd globally for women and 180th globally for men, according to a study carried out by the World Health Organization and the Network of Health Scientists NCD Risk Factor Collaboration.

#### AIMS AND OBJECTIVE OF THE STUDY

- To evaluate the etiopathogenesis of the *Sthaulya Roga* as per Classical texts.
- To evaluate the etiopathogenesis of the *Sthaulya Roga* as per modern Medical science.
- To evaluate the etiopathogenesis of the *Sthaulya Roga* in relationship with B.M.I.
- To evaluate the etiopathogenesis of the *Sthaulya Roga* in relationship with Lipid profile.
- To assess the upashayatamaka parikshana of the Dashanga Guggulu in the *Sthaulya Roga*.
- Clinical evaluation of etiology, types, sign, symptoms in relation to Obesity.
- Management of obesity with help of Diet and Exercise.

#### PLAN OF STUDY

- Review of literature
- Review of drugs
- Clinical study
- Observation and result
- Discussion
- Summary
- Conclusion

#### Conceptual study

##### 1. Review of literature

In this part, historical review about *Sthaulya Roga* had been collected from classical text of *Ayurveda*, previous research work done, scientific journal, periodic magazines, monographs and other available source.

Similarly modern review regarding the obesity have been gathered from the Modern Texts and various other online media. After thorough analysis, the data has been gathered and compiled in an organized manner.

## 2. Disease review

This section includes the detailed description about *Sthaulya Roga* from both the Ayurvedic point as well as Modern point of view.

## 3. Drug review

Includes the brief description of the drugs involved in the formation of *Dashanga Guggulu*.

## CLINICAL STUDY

### MATERIAL AND METHODS

#### SOURCE OF DATA

In this study patients of *Sthaulya Roga* had been registered from OPD and IPD of Roga Nidana and Kayachikitsa and Panchakarma department of Government Ayurvedic P.G. College and Hospital, Varanasi. Selection of patient will be done on the basis of clinical features and diagnosis will be sustained by laboratory investigation.

#### METHOD OF COLLECTION OF DATA

**Selection of cases**-Total 60 patients had been randomly selected for the study that was given *Dashanga Guggulu* with lukewarm water.

#### Diagnostic criteria

For the purpose of diagnosis, a standard research proforma has been prepared on the basis of Principles of Ayurveda and Modern science. Description of signs and symptoms, examination and investigations were included to reach to the final diagnosis of the disease.

#### Inclusion criteria

Patients included in the study were between the ages of 16 to 70 years, presenting with signs and symptoms of *Sthaulya Roga* (obesity). Both male and female participants were included, with a Body Mass Index (BMI) ranging from 25 to 39.9.

#### Exclusion criteria

"Patients with an age below 16 or above 70, those with endocrine disorders, familial combined hyperlipidemia, immuno-compromised status, malignancy, diabetes mellitus, any chronic diseases, and a BMI greater than 40 were excluded."

## ASSESSMENT CRITERIA

### 1. Subjective Criteria

A multi-dimensional scoring method is used for statistical analysis and to provide objective results because the majority of the symptoms and indicators of *Sthaulya* as they are described in *Ayurveda* are subjective in nature.

#### ➤ Loss of Libido (ÑPN<sup>a</sup>O;ok;rk)

##### ❖ Intercourse frequency

>Twice a week	0
Twice a week	1
< Once a week	2
None	3

##### ❖ Masturbation

Does	0
Twice a week	1
< Once a week	2
None	3

##### ❖ Who starts sexual activity?

Always herself	0
Mostly herself	1
Mostly partner	2
Always partner	3

##### ❖ Orgasm

Always	0
Frequently	1
Some times	2
Never	3

#### ➤ Excessive sweating (Losnkf/kD;)

Normal Sweating.	0
My sweating is never noticeable and never interferes with my daily activities.	1
My sweating is tolerable but sometimes interferes with my daily activities.	2
My sweating is barely tolerable and frequency interferes with my daily activities	3

#### ➤ Excessive Hunger (vfr{kq/kk)

Satisfied, neither hungry nor full.	0
Pretty hungry, stomach is beginning to growl.	1
Very hungry, irritable, low energy, large amount of stomach growing.	2
Starving and feeling weak /dizzy.	3

#### ➤ Weakness (nkScZY;)

Active throughout day without enthusiasm.	0
Only daily work with enthusiasm.	1
Only sitting work with enthusiasm.	2
Not enthusiastic about any work.	3

#### ➤ Bad Smell (nkSxZU/;)

No odour.	0
Barely perceivable (Detection threshold).	1
Faint But identifiable (Recognition threshold).	2
Easily perceivable.	3

#### ➤ Excessive Thirst (vfr fiiklk)

Feeling of thirst (7-9 times/ 24 h) and relived by drinking water.	0
Feeling of moderate thirst (>9-11 times/ 24 h) and relived by drinking water.	1
Feeling of excessive thirst (>11-13times/ 24 h) and relived by drinking water.	2

Feeling of severe thirst (>13times/ 24 h) and not relived by drinking water. 3

**2. OBJECTIVE CRITERIA & BIOCHEMICAL TESTS**

❖ **On the basis of Lipid profile test**

**Total Cholesterol**

<200 mg/dl	0
200-229 mg/dl	1
230-239 mg/dl	2
≥240 mg/dl	3

➤ **Sr. Triglyceride**

<150 mg/dl	0
150-199 mg/dl	1
200-499 mg/dl	2
≥ 500 mg/dl	3

➤ **LDL**

100-129 mg/dl	0
130-159 mg/dl	1
160-189 mg/dl	2
≥ 190 mg/dl	3

➤ **HDL**

40- 60 mg/dl	0
>40 mg/dl	1
>30 mg/dl	2
>20 mg/dl	3

➤ **VLDL**

5-30 mg/dl	0
31-60 mg/dl	1
61-100mg/dl	2
> 100mg/dl	3

➤ **Non HDL**

<130MG/DL	0
130-159 mg/dl	1
160-189 /dl	2
≥ 190 mg/dl	3

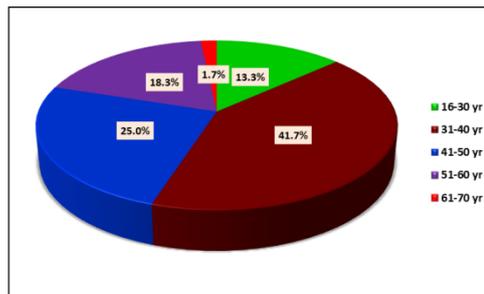
❖ **On the basis of Body Mass Index**

Normal	18.5-24.9	0
Mild	25-29.9	1
Moderate	30-39.9	2
Severe	>40	3

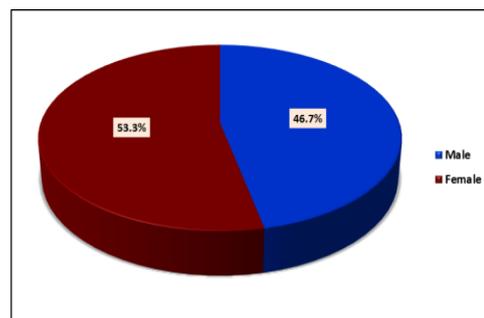
**OBSERVATION AND RESULT**

**DISTRIBUTION OF CASES ACCORDING TO**

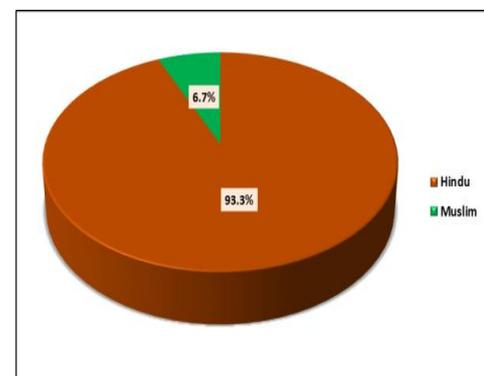
**Age** The largest group falls within the 31-40 years age range, comprising 25 individuals (41.7%). This is followed by those aged 41-50 years, accounting for 15 participants (25.0%). The 51-60 years group includes 11 individuals (18.3%), while the 16-30 years group consists of 8 participants (13.3%). Only 1 participant (1.7%) belongs to the 61-70 years age range. This indicates that the majority of the participants are between 31 and 50 years old.



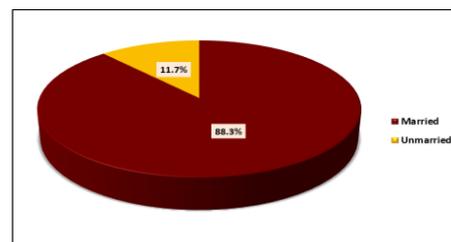
**Gender-** There are slightly more females than males. Out of the total participants, 32 (53.3%) are female, while 28 (46.7%) are male. This indicates a near-equal representation of both genders, with a slightly higher proportion of females in the study.



**Religion-** The majority of the participants were *Hindu*, accounting for 56 individuals (93.3%), while a smaller proportion, 4 participants (6.7%), identified as *Muslim*. This reflects a predominance of Hindu participants in the study population.

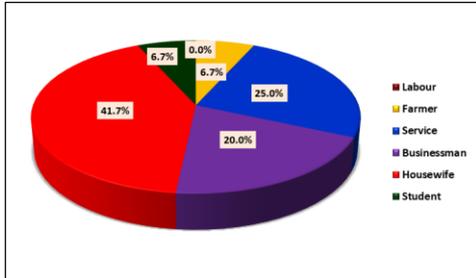


**Marital Status-** Predominantly comprised married individuals, with 53 participants (88.3%) being married, while 7 participants (11.7%) were unmarried. This indicates a higher representation of married individuals in the study.

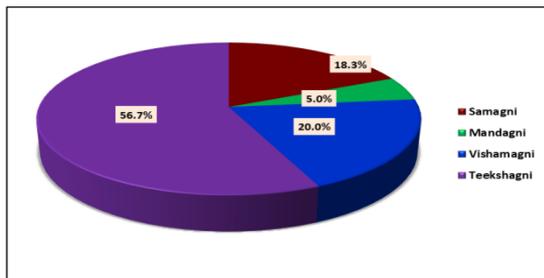


**Occupation**

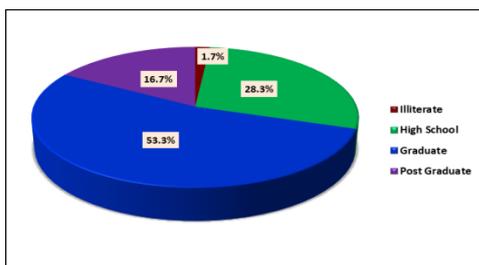
The largest group being housewives, accounting for 25 individuals (41.7%). This was followed by those in service roles, representing 15 participants (25.0%), and businessmen, comprising 12 individuals (20.0%). Farmers and students each represented 4 participants (6.7%), while there were no participants in the labor category (0.0%).



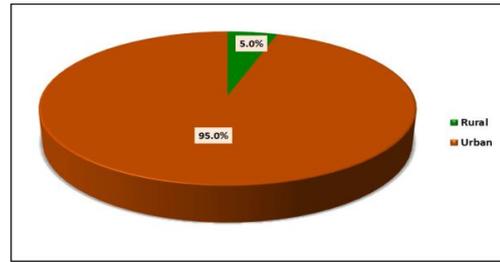
**Agni-** 34 (56.7%), were classified as having *Teekshagni*. *Vishamagni* was observed in 12 participants (20.0%), while *Samagni* was found in 11 participants (18.3%). The least common classification was *Mandagni*, present in only 3 participants (5.0%).



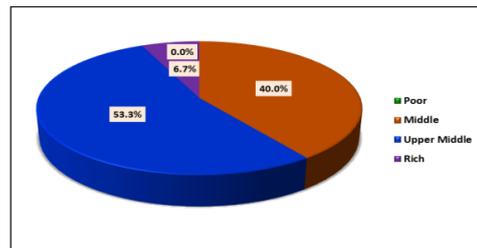
**Education-** Graduates, with 32 individuals (53.3%). Those who completed high school made up 17 participants (28.3%), while 10 participants (16.7%) were postgraduates. Only 1 participant (1.7%) was illiterate.



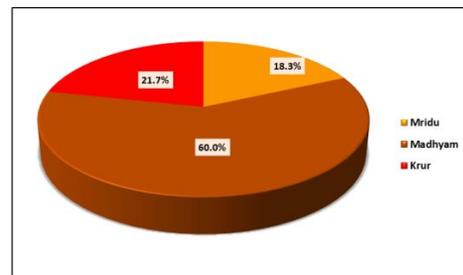
**Habitat-** 57 individuals (95.0%), were from urban areas, while only 3 participants (5.0%) resided in rural areas.



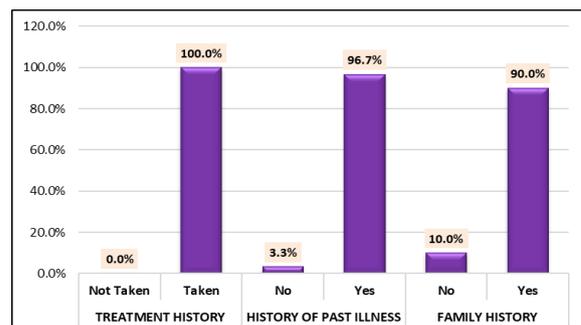
**Socio economic status-** shows that the majority, 32 individuals (53.3%), belonged to the upper-middle class, followed by 24 participants (40.0%) from the middle class. A smaller portion, 4 individuals (6.7%), were classified as rich, and none were categorized as poor.



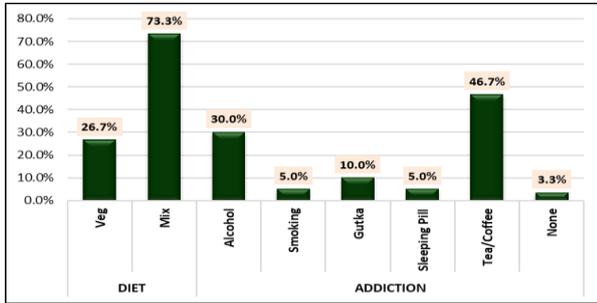
**Koshtha-** The majority, 36 individuals (60.0%), had a *Madhyam Koshtha*, followed by 13 participants (21.7%) with a *Krur Koshtha*. A smaller group of 11 individuals (18.3%) had an *Mridu Koshtha*.



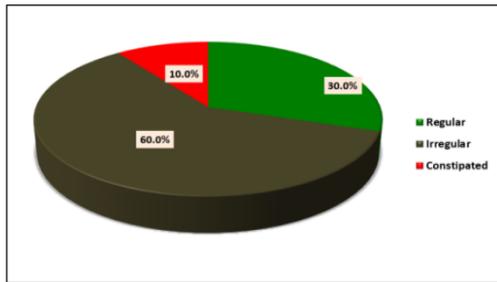
**History-** 100.0% had a treatment history, indicating that every patient had undergone prior treatment. Regarding the history of past illness, 96.7% of the patients reported a history of previous illness, while only 3.3% had no such history. Additionally, a family history of illness was present in 90.0% of the patients, with only 10.0% reporting no relevant family history. These findings highlight the prevalence of both personal and familial health issues in this patient population.



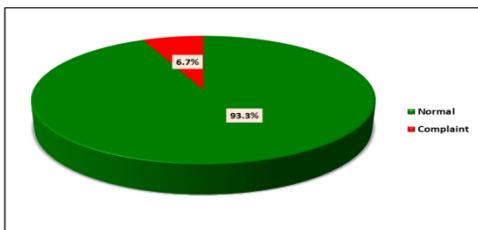
**Diet & Addiction-** Predominantly mixed, with 73.3% following a mixed diet, while 26.7% adhered to a vegetarian diet. Regarding addiction habits, 30.0% reported alcohol use, 5.0% engaged in smoking, and 10.0% used *Gutka*. A small percentage of patients (5.0%) used sleeping pills, and 46.7% consumed tea or coffee regularly. Notably, only 3.3% of the patients reported having no addictions.



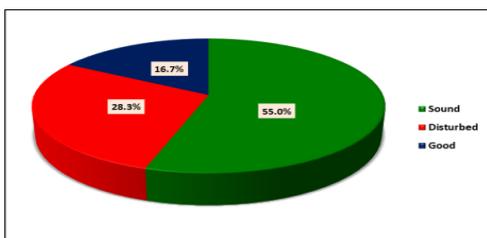
**Bowel Habit-** 60.0% reported having irregular bowel habits, while 30.0% had regular bowel habits. Additionally, 10.0% of the patients experienced constipation.



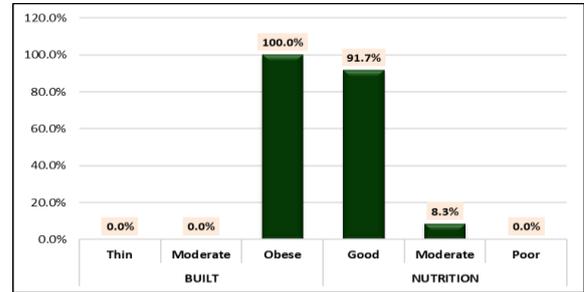
**Urine Condition-** The majority, 93.3%, had normal urine function, while 6.7% reported experiencing urinary complaints.



**Sleep-** Patterns varied, with 55.0% experiencing sound sleep, while 28.3% reported having disturbed sleep. Additionally, 16.7% described their sleep quality as good.



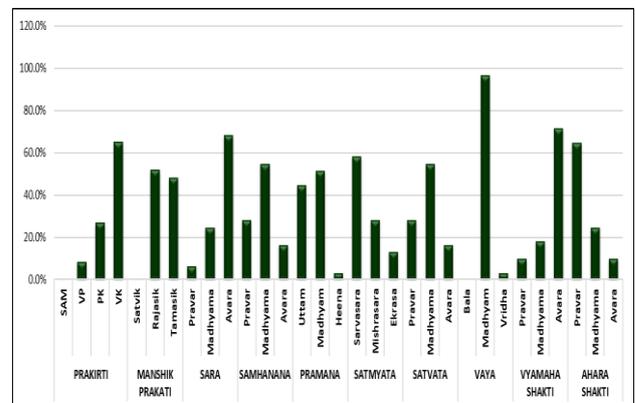
**Built & Nutrition-** 100.0% were classified as obese in terms of body build, with none falling into the thin or moderate categories. Regarding nutritional status, the majority, 91.7%, had good nutrition, while 8.3% were categorized as having moderate nutrition.



**DASVIDHA PAREEKSH**

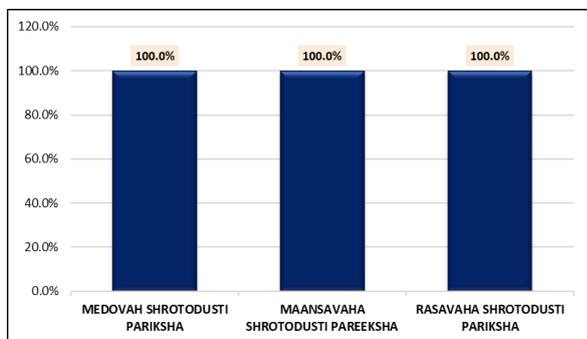
*Dasvidha Pareeksha*

In the *Dasvidha Pareeksha* assessment, patients were categorized based on various physiological and psychological traits. For *Prakriti*, the majority, 65.0%, were classified as *VK (Vata-Kapha)*, while 26.7% were *PK (Pitta-Kapha)* and 8.3% as *VP (Vata-Pitta)*. None were classified as *Sam*. Regarding *Manshik Prakriti*, 51.7% were *Rajasik*, and 48.3% were *Tamasik*, with no patients falling into the *Savik* category. In terms of *Sara*, the majority of patients (68.3%) were classified as *Avara*, while 25.0% were *Madhyama* and 6.7% were *Pravar*. For *Samhanana*, 55.0% were categorized as *Madhyama*, 28.3% as *Pravar*, and 16.7% as *Avara*. In the *Pramana* category, 45.0% were *Uttam*, 51.7% were *Madhyam*, and 3.3% were *Heena*. In terms of *Satmyata*, the majority, 58.3%, were *Sarvasara*, followed by 28.3% as *Mishrasara* and 13.3% as *Ekrasa*. Regarding *Satvata*, 55.0% were classified as *Madhyama*, 28.3% as *Pravar*, and 16.7% as *Avara*. For *Vaya*, 96.7% of patients were categorized as *Madhyam*, with only 3.3% classified as *Vridha*. Regarding *Vyayama Shakti*, 71.7% were classified as *Avara*, 18.3% as *Madhyama*, and 10.0% as *Pravar*. In terms of *Ahara Shakti*, 65.0% of patients were categorized as *Pravar*, 25.0% as *Madhyama*, and 10.0% as *Avara*.



**Shrotodusti Pareeksha-** *Medovah Shrotodusti* was present in 100.0% of the patients, indicating issues related to fat metabolism. Similarly, 100.0% of the

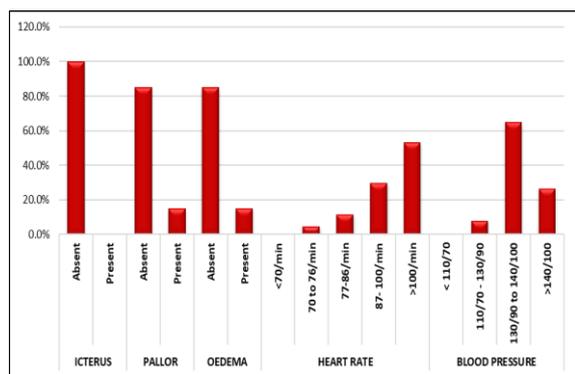
patients showed *Maansavaha Shrotodusti*, suggesting disturbances in muscle tissue metabolism. Additionally, *Rasavaha Shrotodusti* was present in all patients, indicating imbalances in the fluid transport and nourishment systems. There were no patients without these *Shrotodusti* disturbances, highlighting a widespread issue in these metabolic pathways.



**General Examination-** In the general examination of the patients, icterus was absent in all cases (100.0%), while pallor and edema were present in 15.0% of the patients, with 85.0% showing no signs of these conditions.

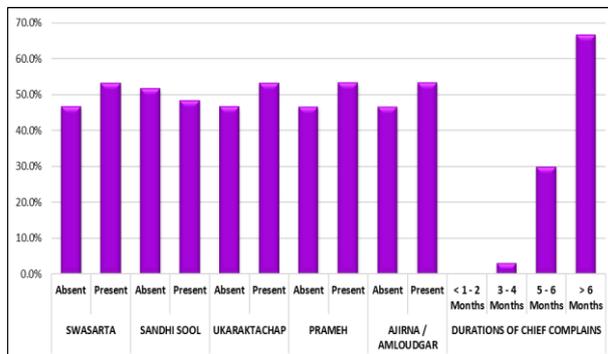
Regarding heart rate, the majority of patients (53.3%) had a rate exceeding 100 beats per minute, followed by 30.0% with a heart rate between 87-100 beats per minute. Smaller percentages were recorded for rates between 77-86 beats per minute (11.7%) and 70-76 beats per minute (5.0%).

In terms of blood pressure, 65.0% of the patients had readings between 130/90 and 140/100 mmHg, while 26.7% had readings above 140/100 mmHg. Only 8.3% had a blood pressure range of 110/70 to 130/90 mmHg, and none had values below 110/70 mmHg.

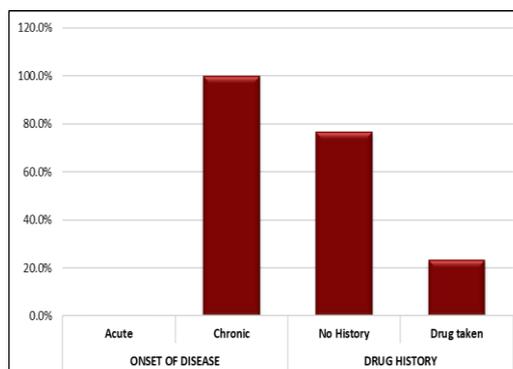


**Chief Complains-** *Swasarta* (breathing difficulty) was present in 53.3% of patients, while 46.7% did not report this symptom. Similarly, *Sandhi Sool* (joint pain) was present in 48.3% of patients, and 51.7% were free from this complaint. Both *Ucharakta Chap* (hypertension) and *Prameh* (diabetes) were reported by 53.3% of the patients, with the remaining 46.7% showing no signs of these conditions. Additionally, *Ajirna/Amloudgar* (indigestion or acidity) was present in 53.3% of patients.

The majority (66.7%) had been experiencing symptoms for more than 6 months, while 30.0% reported symptom duration between 5 to 6 months, and a small portion (3.3%) had complaints lasting between 3 to 4 months. None of the patients had symptoms lasting less than 2 months.



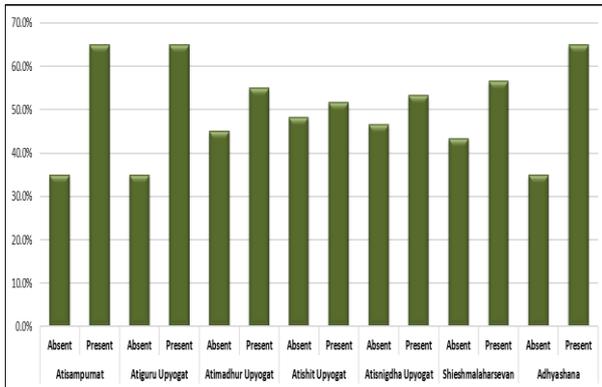
**Disease Status-** Regarding the disease status, all patients (100.0%) were diagnosed with chronic conditions, as none experienced an acute onset of disease. In terms of drug history, the majority of patients (76.7%) had no prior history of drug use, while 23.3% had taken medication for their condition. This indicates that the patient cohort primarily dealt with chronic illnesses and that a notable portion had a history of drug use related to their condition.



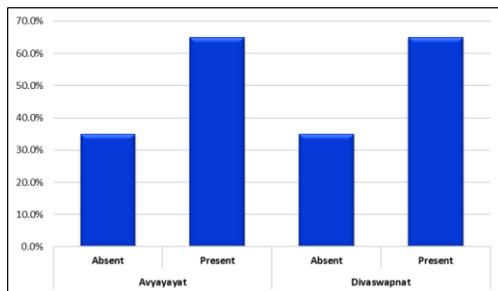
**ETIOLOGICAL FACTORS**

**Aharaj Nidan-** In the *Aharaj Nidan* assessment, various dietary habits were evaluated. For *Atisampurnat* (excessive consumption), 65.0% of patients reported its presence, while 35.0% did not. Similarly, *Atiguru Upyogat* (excessive use of heavy foods) was noted in 65.0% of patients, with 35.0% not affected. *Atimadhur Upyogat* (excessive intake of sweet foods) was present in 55.0% of patients, and 45.0% did not report this issue. Regarding *Atishit Upyogat* (excessive consumption of cold foods), 51.7% of patients were affected, while 48.3% were not. *Atisnigdha Upyogat* (excessive intake of oily foods) was reported by 53.3% of patients, with 46.7% not experiencing this. For *Shieshmalaharsevan* (inappropriate timing of food consumption), 56.7% of patients reported its presence, while 43.3% did not. Lastly, *Adhyashana* (overeating) was present in 65.0% of patients, and 35.0% did not report this habit. This

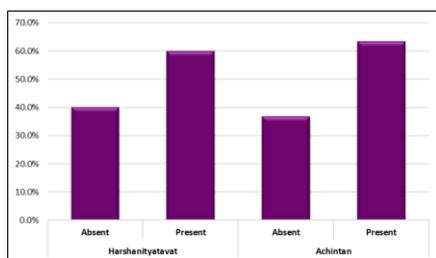
distribution highlights that excessive and inappropriate dietary practices were commonly observed among the patients.



**Viharaj Nidan**-In the Viharaj Nidan assessment, two lifestyle factors were examined. Avyayayat (lack of physical activity) was present in 65.0% of patients, while 35.0% did not exhibit this issue. Similarly, Divaswapnat (daytime sleep) was reported in 65.0% of patients, with 35.0% not experiencing this habit. These findings indicate a significant prevalence of both insufficient physical activity and daytime sleep among the patient population.

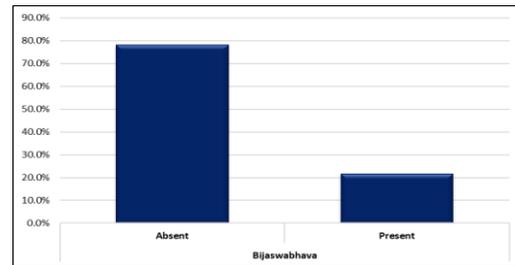


**Mansik Nidan**- In the *Manasik Nidan* evaluation, the psychological and emotional factors were assessed. *Harshaniyatavat* (excessive worry or stress) was present in 60.0% of patients, while 40.0% did not show this condition. Similarly, *Achintan* (excessive or compulsive thinking) was observed in 63.3% of patients, with 36.7% not experiencing this issue. These results highlight a notable prevalence of stress and compulsive thinking within the patient group.

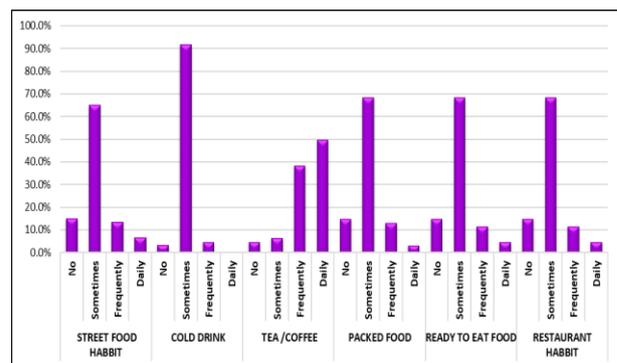


**Bheej Dosh Nidan**- Bijaswabhabha (inherent genetic tendencies) was absent in 78.3% of patients. However, 21.7% of the patients exhibited this condition, indicating

a smaller proportion with identifiable genetic or inherent predispositions related to their health status.



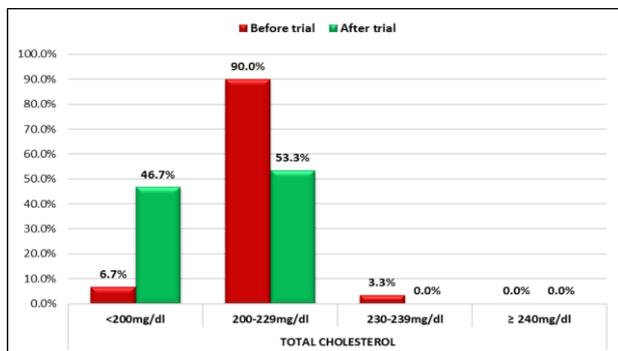
**Sambhavita Nidana**- In the *Sambhavita Nidana* assessment, various dietary and eating habits were evaluated. Street food consumption varied significantly, with 15.0% of patients not consuming it, 65.0% eating it sometimes, 13.3% frequently, and 6.7% having it daily. For cold drink intake, a small proportion (3.3%) abstained, while the majority (91.7%) consumed it occasionally, and only 5.0% did so frequently, with none having it daily. In terms of tea/coffee, 5.0% of patients did not consume it, 6.7% drank it occasionally, 38.3% frequently, and half of the patients (50.0%) consumed it daily. Packed food was avoided by 15.0% of patients, with 68.3% consuming it sometimes, 13.3% frequently, and 3.3% daily. Similarly, ready-to-eat food was not consumed by 15.0% of patients, while 68.3% ate it occasionally, 11.7% frequently, and 5.0% daily. Restaurant habit also showed that 15.0% of patients did not dine out, 68.3% did so sometimes, 11.7% frequently, and 5.0% dined out daily. These findings reflect a range of habits related to street food, cold drinks, tea/coffee, packed and ready-to-eat foods, and restaurant dining among the patients.



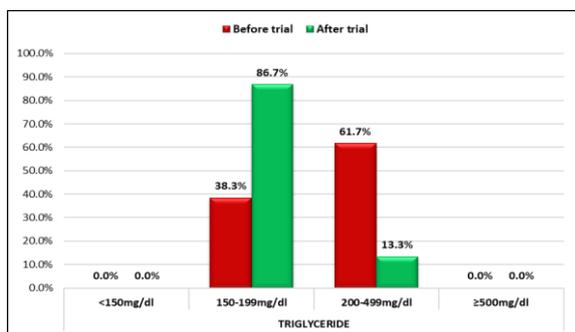
**OBJECTIVE CRITERIA**

**Total Cholesterol Level**- The evaluation of total cholesterol levels before and after the trial revealed significant changes. Before the trial, 6.7% of participants had cholesterol levels below 200 mg/dl, while 90.0% had levels between 200-229 mg/dl. A small proportion, 3.3%, had levels between 230-239 mg/dl, and none had levels  $\geq$  240 mg/dl. After the trial, there was a notable shift: 46.7% of participants saw their cholesterol levels drop below 200 mg/dl, and 53.3% had levels between 200-229 mg/dl. No participants had levels in the 230-239 mg/dl range or  $\geq$  240 mg/dl. The Wilcoxon test comparison

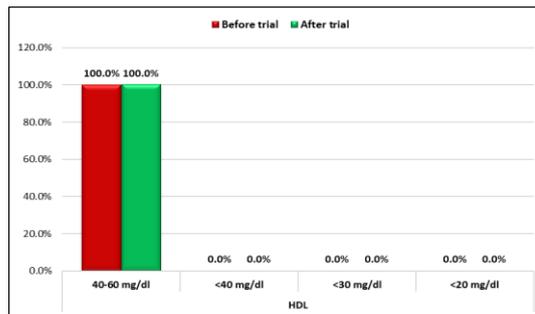
between before and after trial measurements showed a significant reduction in cholesterol levels, with a z-value of 5.10 and a p-value of <0.001, indicating a statistically significant improvement.



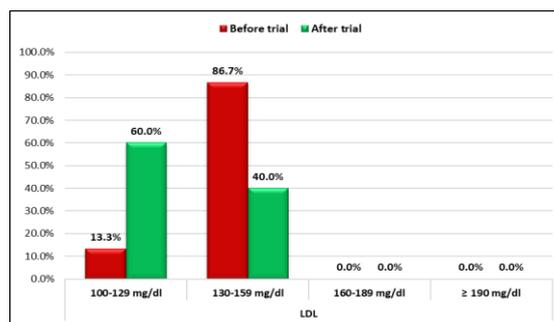
**TG Level-** Initially, none of the participants had triglyceride levels below 150 mg/dl, while 38.3% had levels between 150-199 mg/dl, and 61.7% had levels ranging from 200-499 mg/dl. No participants had levels ≥ 500 mg/dl. After the trial, 86.7% of participants had triglyceride levels between 150-199 mg/dl, and only 13.3% had levels between 200-499 mg/dl. The category of ≥ 500 mg/dl was no longer applicable. The Wilcoxon test results indicated a substantial decrease in triglyceride levels, with a z-value of 5.39 and a p-value of <0.001, reflecting a statistically significant improvement.



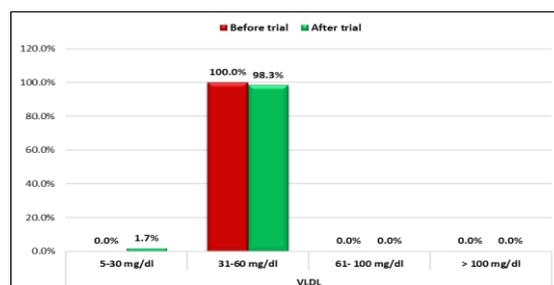
**HDL Level-**The HDL cholesterol levels before and after the trial remained consistent. Initially, 100% of the participants had HDL levels between 40-60 mg/dl, and none had levels below 40 mg/dl. This distribution did not change after the trial, with 100% of participants still having HDL levels between 40-60 mg/dl and no participants having levels below 40 mg/dl. The Wilcoxon test comparison between before and after trial measurements yielded a z-value of 0.00 and a p-value of 1.000, indicating no statistically significant change in HDL cholesterol levels.



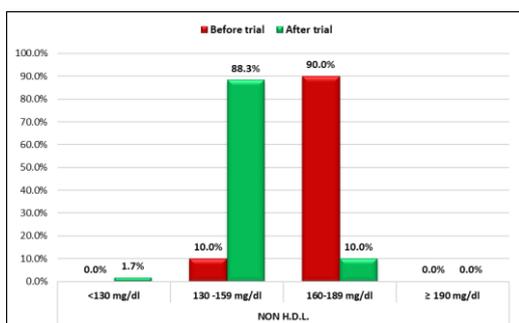
**LDL Level-** The analysis of LDL cholesterol levels before and after the trial demonstrated a significant improvement. Before the trial, 13.3% of participants had LDL levels between 100-129 mg/dl, while 86.7% had levels ranging from 130-159 mg/dl. None of the participants had LDL levels in the 160-189 mg/dl range or ≥ 190 mg/dl. After the trial, there was a notable shift: 60.0% of participants' LDL levels were in the 100-129 mg/dl range, and 40.0% had levels between 130-159 mg/dl. No participants had LDL levels in the higher ranges of 160-189 mg/dl or ≥ 190 mg/dl. The Wilcoxon test revealed a significant decrease in LDL cholesterol levels, with a z-value of 5.29 and a p-value of <0.001, indicating a statistically significant improvement.



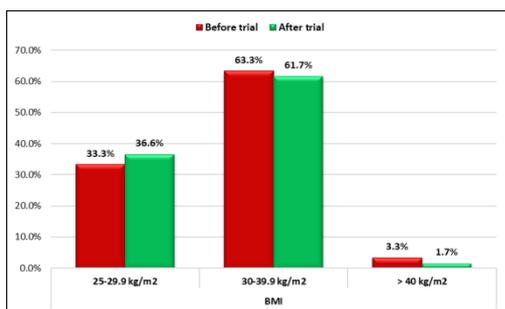
**VLDL Level** The VLDL cholesterol levels before and after the trial was predominantly within the 31-60 mg/dl range. Initially, 100% of participants had VLDL levels between 31-60 mg/dl, and none had levels in the other specified ranges. After the trial, 98.3% of participants continued to have VLDL levels between 31-60 mg/dl, while 1.7% of participants had levels in the 5-30 mg/dl range. There were no participants with VLDL levels in the 61-100 mg/dl range or above 100 mg/dl. The Wilcoxon test indicated no statistically significant change in VLDL cholesterol levels, with a z-value of 1.00 and a p-value of 0.317.



**Non HDL Level-** The non-HDL cholesterol levels before and after the trial showed significant changes. Prior to the trial, 90.0% of participants had non-HDL cholesterol levels between 160-189 mg/dl, while 10.0% were in the 130-159 mg/dl range. There were no participants with non-HDL levels either below 130 mg/dl or above 190 mg/dl. After the trial, a notable shift occurred: 88.3% of participants had non-HDL levels between 130-159 mg/dl, and only 10.0% remained in the 160-189 mg/dl range. A small proportion, 1.7%, had levels below 130 mg/dl. The Wilcoxon test revealed a statistically significant difference in non-HDL cholesterol levels, with a z-value of 7.00 and a p-value of <0.001, indicating a substantial reduction in high non-HDL cholesterol levels post-trial.



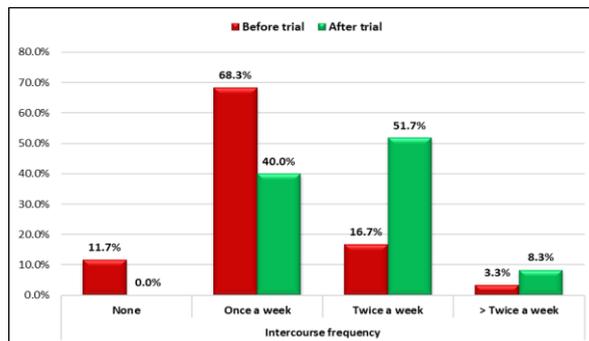
**BMI Level-** Distribution before and after the trial exhibited minor changes. Initially, 63.3% of participants had a BMI in the range of 30-39.9 kg/m<sup>2</sup>, while 33.3% had a BMI between 25-29.9 kg/m<sup>2</sup>. Only 3.3% were categorized in >40 kg/m<sup>2</sup> range. After the trial, the proportions shifted slightly: 61.7% remained in the 30-39.9 kg/m<sup>2</sup> range, 36.6% were in the 25-29.9 kg/m<sup>2</sup> range and 1.7% moved to the >40 kg/m<sup>2</sup> category. The Wilcoxon test results indicated a z-value of 1.73 and a p-value of 0.083, suggesting that the changes in BMI were not statistically significant post-trial.



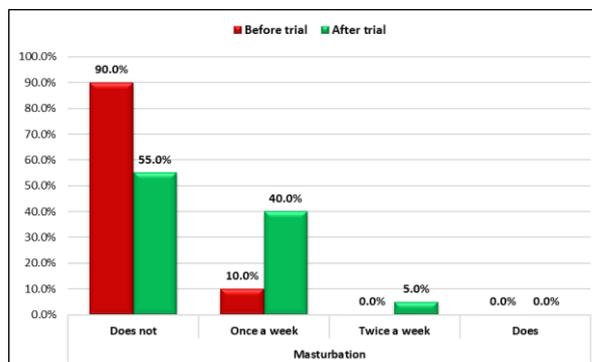
**SUBJECTIVE CRITERIA**

**Intercourse Frequency-** Initially, 68.3% of participants reported engaging in intercourse once a week, 16.7% twice a week, 11.7% none, and 3.3% more than twice a week. After the trial, there was a significant shift: the proportion of participants who engaged in intercourse once a week dropped to 40.0%, while those engaging twice a week increased to 51.7%. The number of participants reporting no intercourse fell to 0%, and those engaging more than twice a week rose to 8.3%. The

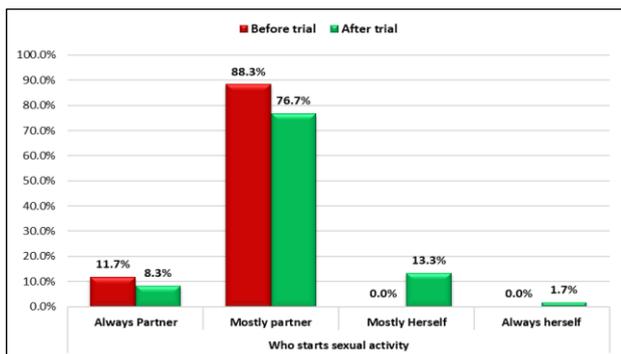
Wilcoxon test indicated a z-value of 5.52 with a p-value of less than 0.001, demonstrating a statistically significant change in intercourse frequency post-trial.



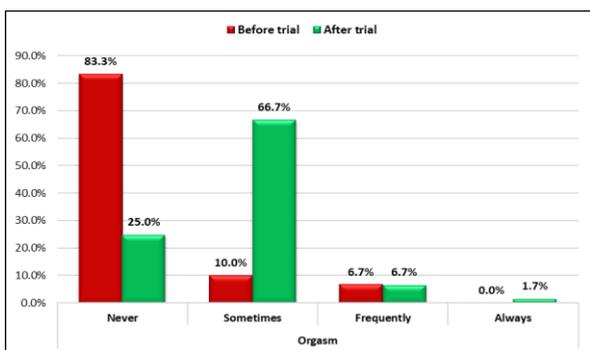
**Masturbation Status-** The analysis of masturbation frequency before and after the trial shows significant changes. Prior to the trial, 90.0% of participants reported not engaging in masturbation, while 10.0% did so once a week. None of the participants engaged in masturbation twice a week or more frequently. After the trial, the percentage of those who did not engage in masturbation decreased to 55.0%. The proportion of participants masturbating once a week increased to 40.0%, and 5.0% reported doing so twice a week. The Wilcoxon test revealed a z-value of 4.71 with a p-value of less than 0.001, indicating a statistically significant change in masturbation frequency following the trial.



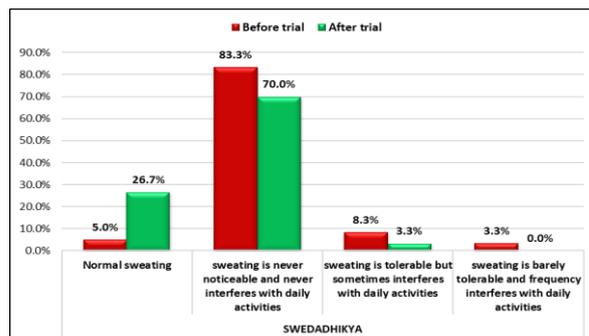
**Sexual Activity with Partner Status-** Before the trial, 11.7% of participants reported that their partner always initiated sexual activity, while 88.3% stated that their partner mostly took the lead. None of the participants initiated sexual activity mostly or always by themselves. After the trial, the proportion of participants whose partner always initiated sexual activity decreased to 8.3%, while those who reported that their partner mostly initiated activity dropped to 76.7%. Conversely, the percentage of participants who initiated sexual activity mostly by themselves increased to 17.7%, and those who always initiated by themselves rose to 1.7%. The Wilcoxon test indicated a z-value of 3.21 with a p-value of 0.001, reflecting a statistically significant change in the dynamics of sexual activity initiation following the trial.



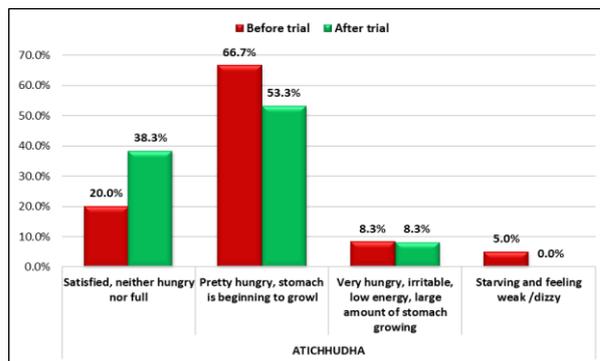
**Orgasm Status-** Before the trial, a significant majority of participants, 83.3%, reported never experiencing orgasm, while 10.0% experienced it sometimes, and 6.7% did so frequently. None of the participants reported always experiencing orgasm. After the trial, the distribution changed markedly: 25.0% of participants reported never experiencing orgasm, 66.7% experienced it sometimes, 6.7% frequently, and 1.7% always experienced orgasm. The Wilcoxon test revealed a z-value of 6.08 with a p-value of 0.001, indicating a statistically significant improvement in the frequency of orgasm among participants following the trial.



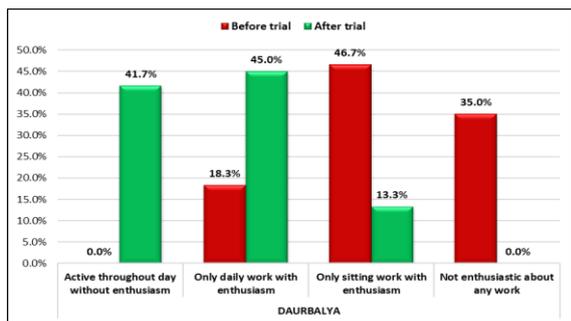
**Swedadhikya Status-** Before the trial, 5.0% of participants reported normal sweating, while 83.3% indicated that their sweating was never noticeable and did not interfere with daily activities. Additionally, 8.3% reported that their sweating was tolerable but occasionally interfered with daily activities, and 3.3% described their sweating as barely tolerable and frequently interfering with daily activities. After the trial, the distribution shifted notably: 26.7% of participants reported normal sweating, 70.0% experienced sweating that was never noticeable or did not interfere with daily activities, and 3.3% reported that their sweating was tolerable but occasionally interfered with daily activities. No participants reported sweating that was barely tolerable and frequently interfered with daily activities. The Wilcoxon test revealed a z-value of 4.47 with a p-value of <0.001, indicating a statistically significant reduction in the severity of sweating and its impact on daily activities following the trial.



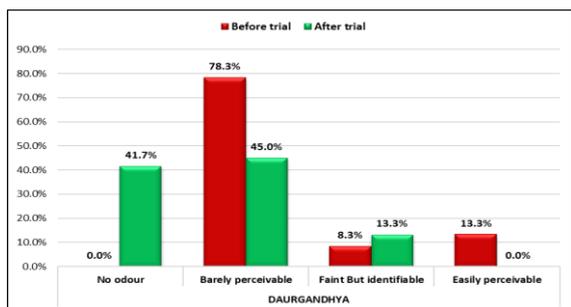
**Atichhudha Status-** Before the trial, 20.0% of participants reported being satisfied, feeling neither hungry nor full. A majority, 66.7%, described themselves as pretty hungry, with their stomach beginning to growl, while 8.3% felt very hungry, experiencing irritability, low energy, and significant stomach growling. Only 5.0% were starving and feeling weak or dizzy. After the trial, 38.3% of participants reported being satisfied and feeling neither hungry nor full. Those who felt pretty hungry decreased to 53.3%, while 8.3% continued to experience significant hunger and related symptoms. Notably, no participants reported feeling starving and weak or dizzy after the trial. The Wilcoxon test showed a z-value of 3.90 with a p-value of <0.001, indicating a statistically significant improvement in the level of hunger and associated discomfort following the trial.



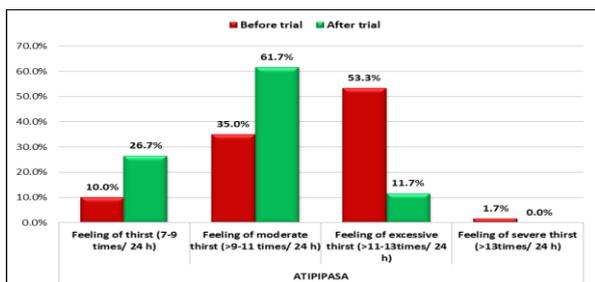
**Daurbalya Status-** Before the trial, 46.7% of participants reported being enthusiastic only about sitting work, while 35.0% was not enthusiastic about any work. Only 18.3% were enthusiastic about daily work, and none were active throughout the day without enthusiasm. After the trial, there was a significant shift: 41.7% of participants were active throughout the day but without enthusiasm, and 45.0% were enthusiastic about daily work. Only 13.3% were enthusiastic only about sitting work, and no participants reported being unenthusiastic about all work. The Wilcoxon test revealed a z-value of 6.11 with a p-value of <0.001, indicating a significant improvement in enthusiasm and activity levels following the trial.



**Daurgandhya Status-** Before the trial, the majority of participants, 78.3%, reported that their body odor was barely perceivable, while 13.3% described it as easily perceivable, and 8.3% found it faint but identifiable. None of the participants reported having no odor. After the trial, 41.7% of participants reported no odor, and 45.0% described their odor as barely perceivable. Only 13.3% found it faint but identifiable, and none reported their odor as easily perceivable. The Wilcoxon test showed a z-value of 6.16 with a p-value of <0.001, indicating a significant reduction in body odor after the trial.

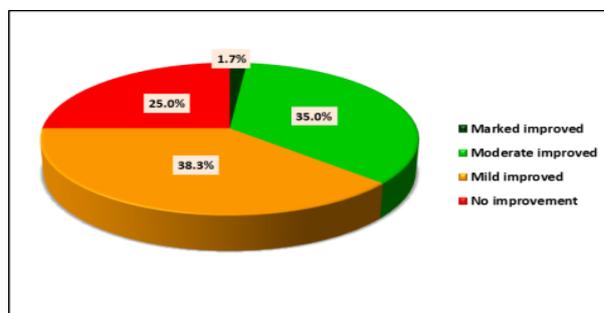


**Atipipasa Status-** Before the trial, 53.3% of participants reported experiencing excessive thirst, defined as feeling thirsty more than 11 to 13 times per 24 hours, while 35.0% felt moderate thirst, occurring more than 9 to 11 times per 24 hours. A smaller proportion, 10.0%, experienced thirst 7 to 9 times per 24 hours, and only 1.7% felt severe thirst, occurring more than 13 times per 24 hours. After the trial, the situation improved significantly: 61.7% of participants felt moderate thirst, while only 26.7% reported feeling thirsty 7 to 9 times per 24 hours, and 11.7% experienced excessive thirst. None of the participants reported feeling severe thirst. The Wilcoxon test revealed a z-value of 6.08 with a p-value of <0.001, indicating a significant reduction in the frequency of excessive thirst after the trial.



**Overall Assessment of Trial Drug-** The overall assessment of the trial participants showed varied levels of improvement. A total of 1.7% of participants experienced marked improvement, while 35.0% showed moderate improvement. The majority of participants, 38.3%, exhibited mild improvement. However, a significant portion, 25.0%, reported no improvement during the course of the trial. These results suggest that while the intervention led to noticeable improvements for most, a quarter of the participants did not experience any positive changes.

Overall Assessment	No.	%
Marked improved	1	1.7%
Moderate improved	21	35.0%
Mild improved	23	38.3%
No improvement	15	25.0%



**MODE OF ACTION OF DASHANGA GUGGULU**

*Dashanga Guggulu* is a classical Ayurvedic formulation known for its effectiveness in managing obesity. Its mode of action includes several key mechanisms as - **Lekhaniya (Scraping):** *Dashanga Guggulu* possesses scraping properties that help in reducing excess fat and aiding in weight loss by mobilizing and metabolizing stored fats in the body. **Enhancing Metabolism:** The ingredients in *Dashanga Guggulu*, such as *Guggulu* (*Commiphora mukul*), are believed to stimulate metabolic processes, thereby increasing energy expenditure and promoting fat oxidation. **Balancing Doshas:** This formulation is specifically designed to balance the *Kapha* and *Vata Doshas*, which are often associated with the accumulation of excess fat. By normalizing these *Doshas*, it helps in regulating appetite and fat deposition. **Detoxification:** *Dashanga Guggulu* also supports detoxification of the body by removing toxins (*Ama*) that may contribute to obesity. This detoxification process can further aid in weight management and overall health. **Anti-inflammatory Effects:** The formulation exhibits anti-inflammatory properties, which can help in reducing inflammation associated with obesity and metabolic disorders.

Overall, *Dashanga Guggulu* acts synergistically to promote weight loss and improve overall health by addressing various factors contributing to obesity.

## DISCUSSION ACCORDING TO

**Age** People aged 31 to 50, especially those in sedentary office jobs or home management roles, are at higher risk of obesity due to decreased physical activity, poor eating habits, and stress. In contrast, obesity rates are lower in younger (16–30) and older (51+) age groups, with hormonal changes and decreased metabolic activity contributing to variations.

**Gender** Among the participants, 46.7% were men and 53.3% were women, with women facing a higher risk of obesity due to hormonal fluctuations and lower basal metabolic rates. Social factors like caregiving duties and less time for exercise also contribute to this increased risk.

**Religion** This religious distribution impacts cultural and social practices, which can also influence health behaviors and conditions like obesity. Obesity in both *Hindu* and *Muslim* populations may be influenced by a lack of health literacy or lifestyle choices driven by cultural practices.

**Marital Status** Married people are more likely to be obese; it is possible that changes in eating habits, lifestyle, or physical activity after marriage have contributed to obesity.

**Occupation** House wife being the most impacted category in this sample, illustrates how lifestyle characteristics associated with various vocations may influence obesity risk.

### Distribution of Cases according to Age

✓ In my study, the highest obesity prevalence (41.7%) was found in individuals aged 31-40 years, followed by 25.0% in the 41-50 years age group.

❖ This trend is attributed to sedentary lifestyles, particularly in office work, Modern jobs are sedentary life style, lengthy periods of sitting, Less physical activity, In this age group, stress, hormonal shifts, and cultural influences can also lead to weight increase in men and women.

### Distribution of Cases according to Gender

✓ All the participants, 28 (46.7%) are men and 32 (53.3%) are women.

❖ women's higher risk of obesity than men, including variations in hormones, particularly throughout life phases like pregnancy, menopause, and the menstrual cycle, which can impact metabolism and fat distribution. Furthermore, women frequently burn calories at a slower rate than males due to having lower basal metabolic rates.

### Distribution of Cases according to Religion

✓ In this study, 93.3% of participants were Hindu, and 6.7% were Muslim.

❖ This reflects the general population distribution in Varanasi, where cultural and religious practices can

influence health behaviors, potentially contributing to obesity patterns in both communities.

### Distribution of Cases according to Marital Status

✓ In the obesity study, 88.3% of participants were married, while 11.7% were unmarried. The higher prevalence of obesity among married individuals may be influenced by lifestyle changes post-marriage, including dietary habits and reduced physical activity.

### Distribution of Cases according to Agni

✓ In the obesity study, the majority of participants (56.7%) had Teekshagni,

❖ Indicating fast metabolism but with frequent hunger that may lead to overeating, Metabolic Imbalance, Improper Fat Storage.

### Distribution of Cases according to Education

✓ In the obesity study, the majority of participants were graduates (53.3%), followed by high school completers (28.3%) and postgraduates (16.7%).

❖ Lack of knowledge and awareness of health

❖ Due to busy schedule work

❖ Fast eating habit can decrease digestive enzyme

### Distribution of Cases according to Education

✓ In the obesity study, the majority of participants were graduates (53.3%), followed by high school completers (28.3%) and postgraduates (16.7%).

❖ Lack of knowledge and awareness of health, Due to busy schedule work, Fast eating habit can decrease digestive enzyme

### Distribution of Cases according to Habitat

✓ In the obesity study, 95% of participants were from urban areas compared to just 5% from rural areas.

❖ Urban lifestyles, which tend to involve sedentary jobs, processed foods, less physical activity, all of which contribute to higher obesity rates in cities.

### Distribution of Cases according to Socio economic status

✓ The majority of participants with obesity came from the upper-middle class (53.3%), followed by the middle class (40.0%).

❖ This distribution can be attributed to easier access to calorie-dense, processed foods, sedentary office-based jobs, both of which contribute to weight gain, Stress and Mental Health, Busy schedules

### Distribution of Cases according to Koshtha

✓ The study indicates that 60.0% of participants fall under the Madhyam Koshtha category.

❖ Poor digestive system, sedentary lifestyles, genetic predispositions, limited awareness of Koshtha implications contribute to this distribution, Dietary Habits, Genetic and Environmental Factors

**Distribution of Cases according to History**

- ✓ all 60 individuals (100.0%) had prior treatment histories,
- ✓ (96.7%) reporting previous illnesses, highlighting a significant prevalence of health issues.
- ✓ (90.0%) had a family history of illness, indicating the impact of both personal and familial health factors in this population.
- ❖ This may be due to genetic factor, Awareness, Health conscious

**Distribution of Cases according to Diet & Addiction**

- ✓ The study found that 73.3% of participants followed a mixed diet.
- ❖ Greater caloric density, larger portion sizes, lower fiber intake compared to vegetarian diets, Higher Caloric Density, Nutritional Balance, Metabolic Effects
- ✓ Regarding addiction habits, 30% reported alcohol use, 5% smoked, and 10% used gutka, while 46.7% consumed tea or coffee regularly,
- ❖ Indicating that substance use can negatively impact metabolism and contribute to obesity, although 3.3% reported having no addictions.

**Distribution of Cases according to Bowel Habit**

- ✓ In the study, 60% of patients reported irregular bowel habits, 30% had regular bowel movements, and 10% experienced constipation,
- ✓ Bowel irregularity was a common issue, likely influenced by factors such as low fiber intake, sedentary lifestyle, Psychological Factors: Emotional stress, Medication Side Effects, hormonal imbalances, and stress, all contributing to gastrointestinal disturbances in obese individuals.

**Distribution of Cases according to Urine Condition**

- ✓ The majority 56 patients- 93.3%, had normal urine function, while 4 patients - 6.7%
- ❖ Normal in all patients other than any UIT problems.

**Distribution of Cases according to Sleep**

- ✓ Total 55% of individuals experiencing sound sleep and 16.7% reporting good sleep.
- ❖ Kapha is in excess, it can lead to weight gain, sluggishness, and a slower metabolism, and hormonal functions leading to increased water retention and fat buildup, making a person more prone to gaining weight.

**Distribution of Cases according to Built & Nutrition**

- ✓ All patients (100.0%) were classified as obese in terms of body build, with none falling into the thin or moderate categories.
- ❖ Imbalance in energy intake and expenditure and excess accumulation of fat

**Distribution of Cases according to DASVIDHA PAREEKSHA**

- ❖ **Prakriti** :- Vata-Kapha (VK) Prakriti (65.0%), followed by Pitta-Kapha (PK) at 26.7%

❖ In the obesity VK are dominant, **Manshik Prakriti** :- In the study of obesity patients, it was observed that 51.7% were classified as Rajasik and 48.3% as Tamasik, The nature of Rajasik and Tamasik mental states and their influence on lifestyle choices.

❖ **Sara**:- a majority (68.3%) were categorized in obesity patients as **Avara (low-quality tissues)**. Due to body structure, excess deposition of fat

❖ **Samhanana (body compactness)**:- Among obesity patients shows that: **55.0% were categorized as Madhyama (moderate compactness)**: Individuals with moderate Samhanana tend to have an average body build, which, along with poor dietary habits and a sedentary lifestyle, may lead to obesity

❖ **Pramana category (body measurement or proportion)**:- Among obesity patients, the distribution is as follows: **45.0% were Uttam (excellent proportion)**

❖ Due to body structure, excess deposition of fat

❖ **Satmyata (habitual diet or compatibility)**:- This category of obesity patients, the distribution is as follows: **58.3% were Sarvasara**: These individuals are habituated to a wide variety of foods and can tolerate different types of diets, (Oka Satma).

❖ **Satvata** (mental strength or fortitude) distribution among obesity patients: **55.0% were classified as Madhyama**: The majority of patients have moderate mental strength, which may lead to inconsistency in discipline regarding diet and lifestyle, contributing to obesity.

❖ **Vaya** (age) distribution among obesity patients: **96.7% were categorized as Madhyam**: Middle-aged individuals are more prone to obesity due to factors like slower metabolism, hormonal changes, decreased physical activity.

❖ **Vyayama Shakti** (exercise capacity) distribution among obesity patients: **71.7% were classified as Avara (low capacity)**: Obesity reduces physical endurance due to excess body fat, leading to fatigue, shortness of breath, and joint pain, which hinders exercise capacity.

❖ **Ahara Shakti** (digestive capacity or food intake strength) among obesity patients: **65.0% were categorized as Pravar (high capacity)**: These individuals likely have strong digestive power and appetite, leading to excessive calorie intake. High Ahara Shakti can result in overeating, which contributes to obesity.

**Distribution of Cases according to 'SHROTODUSTI PAREEKSHA**

❖ **Maansavaha Shrotodusti** was present in 100.0% of the patients, indicating abnormalities in the metabolism of muscle tissue.

**Distribution of Cases according to General Examination**

❖ **Icterus** (jaundice) was absent in all cases (100.0%), obesity patients likely because icterus is typically associated with liver dysfunction or certain blood disorders

❖ **Pallor and Edema** were present in 15.0% of the obesity patients, while 85.0% showed no signs, These conditions may present due to Rasa dusti.

❖ **Heart rate**, the majority of patients (53.3%) had a rate exceeding 100 beats per minute; followed by 30.0%. Heart rate tends to increase in individuals with obesity due to the increased work load on the heart to pump blood through a larger body mass.

❖ **Ucharakta chap (hypertension) and Prameh (diabetes)** were reported by 53.3% of the patients, with the remaining 46.7% showing no signs of these conditions. In obesity, Ucharakta Chap (hypertension) is caused by excess body fat, which increases blood volume and cardiac output.

❖ **Ajirna/amloudgar (indigestion or acidity)** was present in 53.3% of patients, 46.7% were absent symptoms. Ajirna (indigestion) or Amlapitta (acidity) in obesity patients is often caused by poor dietary habits, overeating, and the consumption of heavy, oily, and junk foods that are difficult to digest.

❖ **Chief complain duration:** - The majority of respondents (66.7%) reported that their principal complaints had persisted for over six months. Obesity is chronic disease it takes time for shoroto- dusti.

❖ **Blood pressure**, 65.0% of the patients had readings between 130/90 and 140/100 mmHg, while 26.7% had readings above 140/100 mmHg. Blood pressure increases in obesity patients primarily due to the excess body fat, which raises blood volume and increases the work load on the heart.

#### Distribution of Cases according to Chief Complains

❖ **Breathing difficulty** was present in 53.3% of patients, while 46.7% did not report this symptom. Breathing difficulty in obesity patients is commonly due to the excess fat around the chest and abdomen.

#### Distribution of Cases according to Aharaj Nidan

❖ **Atisampurnat (excessive consumption)**, 65.0% of patients reported its presence, while 35.0% did not.

❖ **Atiguru Upyogat (excessive use of heavy foods)** was noted in 65.0% of patients, with 35.0% not affected.

❖ **Atimadhur Upyogat (excessive intake of sweet foods)** was present in 55.0% of patients, and 45.0% did not report this issue. All these are due to kafa dosh increase in this type of food.

❖ **Ati-shit Upyogat (excessive consumption of cold foods)**, 51.7% of patients were affected, while 48.3% were not.

❖ **Ati-snidha Upyogat (excessive intake of oily foods)** was reported by 53.3% of patients, with 46.7% not experiencing this.

❖ **Shieshma-aharsevan** 56.7% of patients reported its presence, while 43.3% did not. Lastly,

❖ **Adhyashana (overeating)** was present in 65.0% of patients, and 35.0% did not report this habit.

❖ All these are due to kafa dosh increase in this type of food.

#### Distribution of Cases according to Viharaj Nidan

❖ **Avyayayat (lack of physical activity)** was present in 65.0% of patients, while 35.0% did not exhibit this issue. Lack of physical activity or exercise is a major

contributing factor for increasing *Mansa, meda* and *rakta dusti*.

❖ **Divaswapnat (day time sleep)** was reported in 65.0% of patients, with 35.0% not experiencing this habit. Hormonal imbalances that disrupt sleep cycles, leading to fatigue and the propensity for napping during the day, Lifestyle factors, such as a sedentary lifestyle and poor diet, kafa dosh increase due to sleep

#### Distribution of Cases according to Mansik Nidan

❖ **Harshaniyatavat (excessive worry or stress)** was present in 60.0% of patients, while 40.0% did not show this condition, due to a combination of social, psychological, and physiological factors. Increasing stress levels.

❖ **Achintan (excessive or compulsive thinking)** was observed in 63.3% of patients, with 36.7% not experiencing this issue, due to a range of interconnected psychological factors

❖ **Bheeje Dosh Nidan:-** 21.7% of the patients, suggesting a lower percentage of individuals.

#### Distribution of Cases according to Sambhavita Nidan

❖ Cold drink and soda, Tea and coffee, packed food, Ready to eat food, Restaurant habit, all these slow the metabolic rate and increase kafa dosha play an important role in sambhavita nidana

#### Before to After Trial Changes in Total Cholesterol Level

❖ Total cholesterol levels were evaluated before and after the trial, and the results showed significant changes: 90.0% had levels between 200 and 229 mg/dl

❖ Total cholesterol levels typically decrease after treatment for obesity due to a combination of lifestyle changes, including improved diet, increased physical activity, and sometimes medications or interventions like lipid-lowering agents. Treatment helps reduce the amount of fat absorbed in the body and enhances fat.

❖ The Wilcoxon test comparison between measurements before and after the trial showed a significant reduction in cholesterol levels, with a z-value of 5.10 and a p-value of <0.001, indicating a statistically significant improvement.

#### Before to After Trial Changes in TG Level

❖ 61.7% to be between 200 and 499 mg/dl, 38.3% to be between 150 and 199 mg/dl, and Wilcoxon test findings showed a statistically significant improvement in triglyceride levels. Triglyceride levels generally decrease after obesity treatment due to improved dietary habits, increased physical activity, and metabolic changes. Weight loss and reduced fat intake lead to lower triglyceride production in the liver and enhance fat breakdown.

#### Before to After Trial Changes in HDL Level

❖ There was no difference in the HDL cholesterol levels between pre- and post-trial. HDL levels in the range of 40–60 mg/dl. HDL (high-density lipoprotein) cholesterol levels may marginally decline during obesity

therapy as a result of modifications in metabolism and fat redistribution.

#### Before to After Trial Changes in LDL Level

- ❖ The analysis of LDL cholesterol levels before to and following the study revealed a noteworthy enhancement. 86.7% had levels between 130 and 159 mg/dl.
- ❖ After treatment for obesity, LDL (low-density lipoprotein) cholesterol levels typically decrease due to improved dietary habits, increased physical activity, and medication if prescribed. Reducing LDL is crucial as it is known as "bad cholesterol,"
- ❖ With a z-value of 5.29 and a p-value of less than 0.001, the Wilcoxon test showed a statistically significant improvement in LDL cholesterol levels.

#### Before to After Trial Changes in VLDL Level

- ❖ The vast majority of the VLDL cholesterol levels were found to be between 31 and 60 mg/dl both before and after the experiment.
- ❖ VLDL cholesterol levels may marginally decline during obesity therapy as a result of modifications in metabolism and fat redistribution.
- ❖ However, as the readings usually stay within a healthy range, the drop is frequently small and might not have a substantial impact on general health

#### Before to After Trial Changes in BMI Level

- ❖ There were slight variations in the distribution of Body Mass Index (BMI) before and after the study. 63.3% of participants had a BMI between 30 and 39.9 kg/m<sup>2</sup>. Due to decrease in rasa mansa and meda dhau BMI decreases. The results of the Wilcoxon test showed a p-value of 0.083 and a z-value of 1.73, indicating that the post-trial.

#### Before to After Trial Changes in Intercourse Frequency

Frequency increases after treatment due to decrease in mansa and meda Dhatu in following

- ❖ Swedadhikya Status
- ❖ Atichhudha Status
- ❖ Daurbalya Status
- ❖ Daurgandhya Status
- ❖ Atipipasa Status.

All these changes are seen in the entire patient due to decrease in mansa mesa rasa dhatu, along with kafa dosha.

#### DISCUSSION ON RESULT

- ❖ On studying the Upashayatamaka parikhshan through wilcoxon test, it was found that the effect of the Dashang Guggulu showed significant improvement on patients.
- ❖ The aim of my research work was to study the Upashayatamaka Parikhshan of Dashang Guggulu on Sthaulya Roga.
- ❖ From the research work it was found that trial drug was effective on subjective parameters in all subjects and showed significant improvement.

❖ Overall improvement observed was mild improvement.

#### CONCLUSION

- Complete relief was not found in any of the patients.
- Overall effect of therapy suggests mild to moderate improvement in maximum subjects.
- Satisfactory results were obtained in patients of Sthaulya Roga vis-à-vis Obesity, therefore it can be concluded that the given treatment proves to be an effective remedy for Sthaulya.
- However, it is suggested that the study should be continued with larger sample and longer follow up.
- Hence, Null hypothesis is rejected and alternative hypothesis is accepted.

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