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Observational Study To Assess The Sthula Purusha Lakshana In Overweight And Obese

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Abstract

Background: *Ati Sthaulya* is one of the *Santarpannotta Vyadhi* which is also counted under many headings. It is one of among the *Rasa Nimittaja Vyadhi*, *Meda Pradoshaja Vyadhi* and has been given prime importance among *Asta Nindita Purusha*'s. So, looking upon the importance of his disorder, an attempt is made to understand and assess the *Sthula Purusha Lakshana* mentioned in classics by eliciting these *Lakshanas* in overweight and obese subjects, by developing questionnaire. **Aims and Objectives:** To prepare questionnaire to assess *Sthula Purusha Lakshana*.

To assess *Sthula Purusha Lakshana* in overweight and obese individuals. To compare and analyse the *Lakshana* observed in overweight and obese subjects as to mark the threshold BAI as an alarming stage.

Materials and Methods: A structured case proforma was designed to document observations across *Sthula Purusha Lakshana* and observations will be systematically recorded and analysed descriptively to validate classical descriptions. **Discussion:** A comparative analysis will be undertaken to correlate classical *Ayurvedic* guidelines with present-day clinical outcomes using the tool BAI. This work intends to observe the symptoms of *Sthula Purusha Lakshana* and mark the threshold point in scale of Body Adiposity Index (BAI) as alarming stage. **Conclusion:** Both overweight and obese groups predominantly cluster in Grade 3, but obesity shows progression into Grade 4 with more severe *Sthoulya Lakshanas*, while overweight remains limited to Grades 2 and 3.

Keywords: *Sthula Purusha Lakshana*, BAI, Overweight, Obese.

Introduction

Sthaulya is described under *Ashta Nindita Purusha* due to its *Dosa-Dusya* involvement and unfavourable prognosis¹. It is considered a *Kapha-Pradhana* condition and hence classified as a *Shleshma-Nanatmaja Vyadhi*, as a *Santarpananimittaja Vyadh*² because it arises from over-nourishment due to *Guru*, *Madhura*, *Snigdha*, and *Shita Ahara* along with sedentary habits, and also as a *Brimhananimittaja Vyadhi*³ owing to excessive use of *Brimhana Dravyas* such as *Ghrita*, *Taila*, *Payasa*, and other nourishing substances which directly lead to *Medo-Vridhhi*. Furthermore, it is regarded as an *Adhika dosa Yukta Vyadhi*⁴ due to the predominance of *Kapha* and *Meda*; it falls under the category of *Ashtonindita Vyadhi* because of reduced strength, shortened lifespan, and multiple complications. In terms of therapeutic approach, *Sthaulya* patients are *Taila-Sevana Ayogya*⁵, since unctuous therapies aggravate *Meda*, and they are also *Svedana Ayogya*⁶ because excessive sweating therapies can worsen *Kleda* and *Meda*, thus requiring careful selection of treatment protocols.

Classical texts describe eight inherent defects of *Sthoulya*, including reduced lifespan, restricted mobility, diminished sexual vigor, debility, foul odor, profuse sweating, and excessive hunger and thirst. The condition arises from factors such as indulgence in heavy, sweet, cold, and fatty foods, lack of physical activity, daytime sleep, abstinence from sexual activity, hereditary predisposition, and mental inactivity⁷. Pathophysiologically, the confinement of *vata* within the abdominal viscera stimulates digestive fire (*agni*), causing rapid digestion and voracious appetite, which further aggravates the disorder. As fat and muscle tissues accumulate disproportionately in regions like the buttocks, abdomen, and breasts, metabolism weakens, energy declines, and the risk of severe diseases increases. Thus,

Sthoulya is not merely a cosmetic concern but a serious systemic disorder that threatens health and longevity⁸.

Modern medicine recognizes obesity as a multifactorial condition influenced by genetics, psychology, metabolism, lifestyle, and socio-economic factors. It has become a global epidemic, with the WHO identifying it as the most common form of malnutrition worldwide. In 2022, 2.5 billion adults aged 18 years and older were overweight, including over 890 million adults who were living with obesity (1). This corresponds to 43% of adults aged 18 years and over (43% of men and 44% of women) who were overweight; this is an increase from 1990, when 25% of adults aged 18 years and over were overweight⁹.

This study attempts to integrate Ayurvedic *Lakshana* of *Sthoulya* with modern measures like the Body Adiposity Index (BAI), grading patients into overweight and obese categories. Such correlation provides a holistic framework for evaluating therapy outcomes and bridging traditional wisdom with contemporary scientific assessment.

The following domains are selected

- *Ayushoraasa*
- *Chala Sphik Udara Stana*
- *Aalasya*
- *Dourbalya*
- *Swedadikyata*
- *Dourgandya*
- *Kshudra Shwasa*
- *Atinidra*
- *Atipipasa*
- *Ati kshuda*

Despite the detailed classical descriptions of **Sthoulya** (obesity) in Ayurvedic literature, clinical assessment often lacks uniformity and remains largely subjective. While the traditional *lakshana* (signs and symptoms) provide a comprehensive framework, their direct application in modern practice requires standardization. This study seeks to correlate Ayurvedic diagnostic features of Sthoulya with contemporary measures such as the **Body Adiposity Index (BAI)**, thereby categorizing patients into overweight and obese groups. Such an approach not only enhances objectivity in clinical evaluation but also establishes a holistic framework for assessing therapeutic outcomes. By bridging traditional wisdom with modern scientific parameters, this integration offers a more reliable and comprehensive method for understanding and managing obesity.

Body Adiposity Index (BAI)¹⁰

The calculations are based on a comparison of the person's height to hip size. Several studies on population show that the BAI is approximately equal to the body fat percentage for adult men and women of differing ethnicities and of different ranges of age.

For calculations, it uses the formula (for both males and females):

$$\text{BAI} = (\text{hip circumference}/(\text{height})^{1.5}) - 18$$

where: hip circumference is in centimetres and height is in meters.

Calculating the body adiposity index, divide your hip circumference (in cm) by your height (in m) raised to the power of 1.5, and then subtract 18.

MATERIALS AND METHODS

Source of data:

Literary source:

Literary source of the present study was collected from all classical texts of *Ayurveda*, *Ayurvedic* literature and journals. Additional information's was collected from relevant websites, articles, and presentations. The following materials are used for the study

- *Bruhatrayee* with the commentaries.
- *Laghutrayee* with commentaries.
- *Vedic* literature.
- Other *Samhitas* of *Ayurveda*

Survey source:

1. 100 Patients fulfilling the inclusion criteria will be selected from OPD and IPD of Sri Dharmasthala Manjunatheshwara Ayurveda Hosptial, Kuthpady, Udupi.
2. Patients will be assessed through the prepared case proforma for *Sthula Purusha Lakshana*

Inclusion criteria:

- Subjects of age group 20yrs to 60yrs.
- Subjects whose BAI indicates overweight and obese are included.

Exclusion criteria:

- Subjects with hormonal disorders.
- Pregnant women and lactating mothers

Study Design**Questionnaire Development:**

Relevant data for creating the questionnaire on sthula purusha lakshana were gathered from various Ayurvedic texts. • Compilation of Sthula Purusha Lakshana was done from both Bruhattrayee and Laghutrayee. • Meanings of each lakshana were collected from different Samhitas, Shabdakalpadruma, and other dictionaries. • A questionnaire was developed based on the reviewed data for the following domains.

Ayushoraasa, Chala Sphik Udara Stana, Aalasya, Dourbalya, Swedadikyata, Dourgandya, Kshudra Shwasa, Atinidra, Atipipasa, Ati Kshuda

Using the definitions of these domains, a questionnaire was developed with questions framed in English, along with demographic information and a diagnosis section.

The questionnaire includes sections for personal information, daily routine, and questions related to Sthula Purusha Lakshanas.

Grading for each domain is assigned based on the intensity of the symptom, with scores categorized as Grade 1, Grade 2, and Grade 3.

- The proforma was filled in the presence of the patient by ticking the *Lakshanas*
- Minor spelling and grammatical errors were addressed during the refinement process.
- Modifying the questions of quality of life, according to the domains.
- These efforts concluded with the development of the final questionnaire.

Method of Data Collection

A total of 100 subjects, with 50 from each of overweight and obese subjects, were selected base on BAI. Administration of questionnaire:

- The consent of the subject was taken.
- The questionnaire was administered using the interview method.
- The questions are open-ended, with gradings according to the intensity of the domains and the gradings are marked.
- Subjects of both genders diagnosed with overweight and obese were randomly selected based on inclusion and exclusion criteria.
- Observations were systematically recorded and later analysed what are the different sectors of people suffering from overweight and obese.

Assessment Criteria**Subjective Criteria:**

Assessment was based on the presence or absence of *Sthula Purusha Lakshanas*

Objective Criteria:

Body Adipose Index

Documentation Approach:

The case proforma included demographic details and questions. Informed consent was obtained from all participants prior to inclusion in the study.

Data Analysis:

The information collected from each patient during the study was organized and examined using descriptive statistics.

The findings were further interpreted based on the total number of *Lakshanas* observed in each patient, summing up to derive a grading which represents the degree of pathogenesis:

Table 1. observations:

Group	Grade 1	Grade 2	Grade 3	Grade 4
Overweight	0	11	39	0
Obese	0	2	38	10

Observations and Results

The total score of 80 was divided into four grades, providing a structured framework to assess the severity of Sthoulya Lakshanas. This grading system allowed for clear differentiation between overweight and obese individuals:

- Overweight Group:**
 Most subjects clustered in Grade 3 (n=39), with a smaller subset in Grade 2 (n=11). None were observed in Grades 1 or 4. This indicates that even moderate adiposity manifests with multiple classical features of Sthoulya, though not at the extreme severity seen in obesity.
- Obese Group:**
 The majority were also in Grade 3 (n=38), but importantly, Grade 4 (n=10) was present, reflecting severe symptomatology. Only 2 individuals were in Grade 2, with none in Grade 1. This progression highlights the escalation of Lakshanas with increasing adiposity.

Table 2. Summary of Observations

Sample	Overweight (50)			Obese (50)		
	Mild	Moderate	Severe	Mild	Moderate	Severe
Frequency of sweating	10	20	20	8	18	24
Odour of sweat	12	28	10	8	22	20
Frequency of thirst	14	20	16	10	18	22
Frequency of hunger	18	22	10	12	20	18
Breathlessness	20	18	12	12	20	18
Reduced overall strength	8	24	18	6	20	24
Lethargy	16	20	14	10	18	22
Improper sleep	10	22	18	8	18	24
Pendulous breast, buttocks and abdomen	12	26	12	10	20	20
Quality of life	8	22	20	6	18	26

Discussion

Sthoulya, as described in Ayurveda, is not merely an excess of body weight but a complex disorder arising from **Meda dhatu vridhhi (increase of fat tissue)** and **Kapha dosha aggravation**. Classical Lakshanas such as *Ayushohrasa* (reduced lifespan), *Javoprodha* (loss of agility), *Daurgandhya* (foul odour), *Swedadikya* (excessive sweating), *Atinidra* (excess sleep), and *Moha* (mental confusion) reflect both physical and psychosomatic dimensions of the disease. These symptoms, though described centuries ago, remain highly relevant in the context of modern lifestyle disorders.

This quantification not only strengthens the diagnostic relevance of Ayurvedic Lakshanas but also provides a practical tool for risk stratification. By correlating symptom severity with BAI, the study highlights a potential threshold value that could serve as an early warning marker for progression from

overweight to obesity. Such integration enriches both systems of medicine: Ayurveda gains measurable parameters for research, while modern medicine benefits from culturally rooted symptomatology that captures psychosomatic dimensions often overlooked in purely biomedical models.

In present-day life, these Lakshanas manifest as physical limitations (breathlessness, stiffness, fatigue), psychosocial distress (embarrassment, reduced confidence), and metabolic risks (excess hunger, thirst, weakness). Thus, Sthoulya is not merely a cosmetic concern but a **serious lifestyle disorder** affecting quality of life, productivity, and longevity.

Overall, this study demonstrates that Ayurvedic Lakshanas can be operationalized into quantifiable scores, offering a novel framework for integrative obesity research. It lays the foundation for future studies to incorporate biochemical markers, larger sample sizes, and multi-centric validation, ultimately guiding personalized preventive and therapeutic strategies.

Importantly, the observations revealed that Nidra (excess sleep) emerged as a major culprit among the Nidanas, reflecting the impact of sedentary lifestyle and Kapha aggravation in present-day life. This aligns with modern patterns of inactivity, desk-bound routines, and reduced physical exertion, which contribute significantly to obesity and its complications.

Thus, the study not only identifies which Lakshanas dominate in overweight and obese individuals, but also rationalizes their connection to lifestyle disorders, highlighting how classical Ayurvedic insights remain relevant in understanding the psychosomatic and metabolic dimensions of obesity today.

Rationality of Lakshanas in Lifestyle Disorders

- **Dietary excess (Aharatmaka Nidana):** Overconsumption of calorie-dense, sweet, and oily foods directly leads to Meda accumulation, manifesting as heaviness, pendulous body parts, and impaired metabolism.
- **Sedentary habits (Viharatmaka Nidana):** Lack of physical activity, excessive sleep, and desk-bound routines aggravate Kapha, causing fatigue, stiffness, and breathlessness.
- **Psychological stress (Manasika Nidana):** Emotional eating, stress, and mental strain contribute to overeating and poor digestion, leading to symptoms like excessive hunger, thirst, and delusion.
- **Hereditary predisposition (Beejadoshha):** Genetic factors combine with lifestyle triggers, resulting in early onset obesity and related complications.

Conclusion

This study shows that the **qualitative Lakshanas of Sthoulya can be rationally interpreted in the light of modern lifestyle disorders**, making them clinically relevant even today. By integrating classical descriptions with contemporary health challenges, Ayurveda offers a holistic framework for understanding obesity—not just as excess weight, but as a disorder affecting **quality of life, social wellbeing, and long-term health outcomes**.

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