



ASSESSMENT OF VARIOUS UPAVASA (FASTING) PRACTICES AND THEIR METABOLIC EFFECT ON HUMAN HEALTH, ALIGNING THE SAMYAK LAKSHANA OF LANGHANA CONCEPT

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ABSTRACT

Background and Objective: Rooted in Ayurveda, *Upavasa* (Fasting) is considered a therapeutic approach to cleansing the body and restoring balance to the *doshas* (life forces). The study investigates various *Upavasa* (fasting) practices and their metabolic effects on human health. The primary aim was to evaluate the prevalence of these *Upavasa* (fasting) methods and their metabolic effects, aligning with the concept of *Samyaka Lakshana* of *Langhana* (appropriate signs of lightening therapy). **Materials and methods:** In this Survey-based observational study, 500 healthy individuals from Paprola, Baijnath, Distt. Kangra and Sub-division Joginder Nagar, Distt. Mandi in Himachal Pradesh was recruited. The whole population was divided into two subsets. **Subset-1 (Control):** comprised of 250 participants not practising *Upavasa*(fasting). **Subset-2 (Observational):** 250 participants regularly practised *Upavasa* (fasting) for at least three months. For the assessment of Samyak Lakshana of Langhana, a self-structured questionnaire was developed using the Visual Analogue Scale (VAS). Statistical methods were used to analyse the data, including the Mann-Whitney U test and unpaired t-tests. **Results:** Data from 500 subjects was analysed. The maximum number of subjects who did *Upavasa* were females (74.8%), in the age group of 27-36 years (45.2%), and married (62.3%). The majority of the subjects were vegetarians (63.6%), had normal dietary habits (73.2%), had normal appetite (98.2%), normal thirst (81.2%), had no addiction

(100%), normal sleep (71.6%), regular bowel movement (90.8%). Maximum subjects (66.8%) do *Upavasa* because of their religious beliefs, (34.8%) practising *Upavasa* for 12 hrs, (32.8%) do it once a month. Out of 250 (37.2%) subjects consume fruits and vegetables during *Upavasa*. Upon breaking *Upavasa*, 78.4% of subjects chose to eat cooked millet, green leafy vegetables or cereals, and 60% maintained their usual food intake after *Upavasa*. 51.2% experienced no change in hunger after *Upavasa*, and 44.4% felt better after doing *Upavasa*. Symptom (*Samyak Lakshana of Langhana*) (*Cha. Sa. Su. 22/34-35*) wise distribution of the two subsets of the study population. Data revealed that symptoms of two subsets, i.e., *Vata visarga*, *Mutra visarga*, *Purisha visarga*, *Gatra laghava*, *Hridaya shuddhi*, *Kantha shuddhi*, *Udgara shuddhi*, *Ruchi* (for food), *Kshudha*, *Pipasa* showed highly significant difference ($p < 0.001$). Meanwhile, for *Nirvyathe*, *cha antaratmani* was moderately significant ($p = 0.002$). **Conclusion:** The study analysed data from 500 subjects practising *Upavasa* and found that the majority were females aged 27-36 years, married. Religious beliefs were the primary reason for fasting, with most participants practising it for 12 hours once a month. Significant improvements in metabolic and physiological markers, such as *Vata visarga*, *Mutra visarga*, *Gatra laghava*, and *Ruchi*, were observed, aligning with the *Samyak Lakshana of Langhana*. These findings highlight the therapeutic potential of *Upavasa* in maintaining health and balance by Ayurvedic principles.

Keywords: *Upavasa*, *samyak lakshana of langhana*, *Ayurveda*

INTRODUCTION

Upavasa or fasting is an ancient technique practised for thousands of years, but fasting has gained immense popularity in the last 10–15 years. It is a way to purify the body and a holistic practice that heals the mind, body, and soul. Contemporary obstacles such as unhealthy diets, lack of exercise, and an imbalanced lifestyle have resulted in widespread health problems. Apart from providing various therapeutic measures for diseases, Ayurveda emphasises maintenance, promotion of health and prevention of diseases through diet and lifestyle regimens. In Ayurveda, *Upavasa* is one among the *Daiva Vyapashraya Chikitsa* (spiritual therapies) as well as one of the modalities among ten *Langhana* (therapies) त्रिविधमौषधमिति - दैवव्यपाश्रयम्, युक्तिव्यपाश्रयम्, सत्वावजयश्च च । तत्र दैवव्यपाश्रयम् मंत्रौषधिमणिमंगलबल्युपहारहोमनियमप्रायश्चित्त-

उपवासस्वसत्यनप्रणिपाततीर्थगमनआदि... (Ch. Su. 11/54)

चतुष्प्रकारासंशुद्धि पिपासामारुतआतपौ । पाचनान्युपवासश्चव्यायामश्चइति लङ्घनम्॥ (Ch. Sa. Su. 22/18)

Langhana (*Upavasa*) has been advised in many diseases as prime treatment, or in *Amavastha*, for diseases.

अक्षि कुक्षि भवारोगाः प्रतिश्याय व्रणज्वराः।

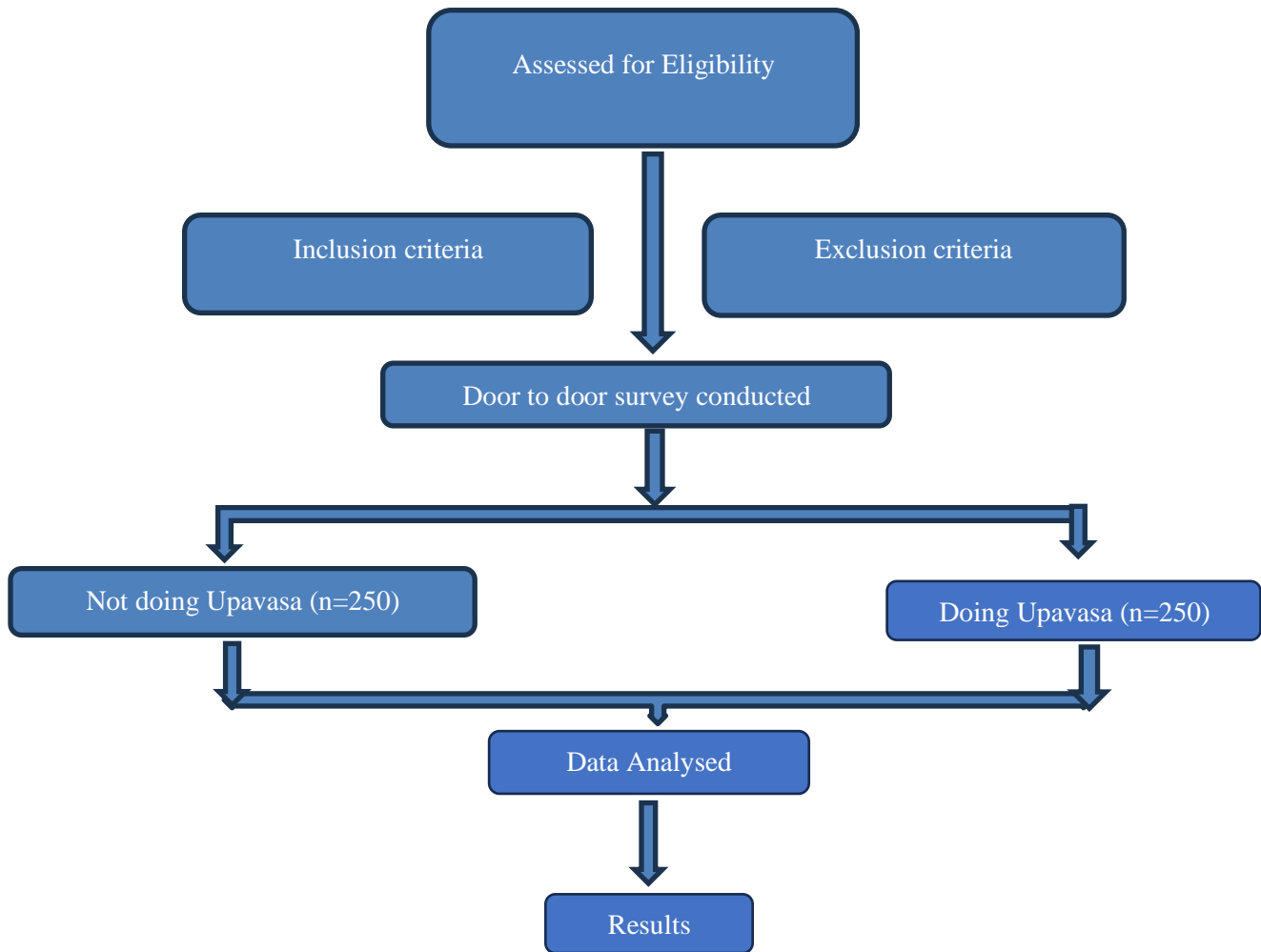
पञ्चैतेपंचरात्रेणप्रशमं यान्ति लँघनात् ॥ (Chkr. Netrarogadhikara 3)

Fasting or *Upavasa* is a voluntary refusal to eat for a specific time to rest the digestion organs. It aids in getting rid of flesh infested with toxins and impurities, thus reserving vital energy to remove poisonous foreign substances built up within the body. Intermittent fasting is a novel method of dietary intervention. Modified/Intermittent fasting specifically differs from traditional fasting in the fact that modified fasting allows some caloric intake to occur during the fasting period, most often in minimal caloric quantities of carefully selected foods that can provide dramatic metabolic responses leading to individual health benefits, including improved weight regulation, enhanced insulin sensitivity status, reduced inflammation and potential life extension advantages. Hence, several attempts have been made to understand the interested subject under the sequential heading “Assessment of various *Upavasa* (fasting) practices and their metabolic effect on the human health, Aligning the concept of *Samyak Lakshana of Langhana*.”

Materials and methods:

Study design:

This was a prospective, random observational study. Figure 1 shows the flowchart for this study.



Inclusion and exclusion criteria:

Inclusion Criteria: Healthy subjects willing to participate in the study irrespective of gender, race, religion and socio-economic status. Subjects between 18-50 years age group. Subjects who had given written consent.

Exclusion Criteria: Subjects not willing to participate in the study. Subjects who have not been fasting for three months. Subjects below 18 years and 50 years of age. Pregnant females and Lactating mothers.

Sample size: 500 apparently healthy individuals (male and female) were recruited for the present study.

Assessments and data collection:

Objective measures: Height, weight, BMI. Subjective measures: A visual analogue scale and a self-structured questionnaire will be used to assess different Upavasa practices and Samyaka Lakshna of Langhana. Out of 500, 250 subjects practising Upavasa comprised the observational group of the study, referred to as Subset-2. Another group of 250 subjects who had not engaged in Upavasa (fasting) were considered the control group, referred to as Subset-1.

Study outcome: The **outcomes** of the study, as outlined in the document, are as follows:

Primary Outcomes: The primary outcome of the study was discovering different Upavasa practices in the region. It also aimed to observe and compare the Samyaka Lakshana of Langhana (fasting) in the two subsets of the population using the Visual Analogue scale (VAS) secondary **Outcomes:** The impact of practising Upavasa on Lifestyle.

Data collection: Following the approval from the Institutional Ethical Committee and Registration with the clinical trial registry of India, the survey was conducted in Paprola, Baijnath, Kangra and Sub-division Joginder Nagar Dist.Mandi. Informed consent was obtained from all the participants who met the inclusion criteria. Subsequently, the participants were interviewed using a self-structured questionnaire, and relevant investigations were carried out.

Statistical analysis method: Data was entered into **Microsoft Excel** and analysed using **SPSS** software. Mean and standard deviation measures were used to summarise demographic data and other variables. Unpaired t-test: The Mann-Whitney U test was used to compare means between two independent groups (e.g., fasting and non-fasting).

Results: 500 participants were interrogated for the study. The participants were equally divided into two groups. The first group was the control group, which contained participants not doing Upavasa. The second group comprised participants who were doing Upavasa. These were then interrogated using a self-structured questionnaire comprised of *Samyaka Lakshana of Langhana*.

Demographic characteristics of participants:

Gender: It was observed that females were more prevalent in both the subsets of the population, i.e., 70.4% (176) in subset-1 and 74.8% (187) in subset-2 whereas males comprise only 29.6% (74) and 25.2% (65), respectively. **Age:** In subset-1, 45.2% (113) of subjects were in the age group 17-26, whereas in subset-2, in the same age group, the number of participants was 16% (40). This indicates that the younger population is less inclined to practice *Upavasa* com-

pared to those who practice *Upavasa* (subset-2), the largest group includes 45.2% (113) subjects aged 27-36. This may be because subjects in this age group are full of energy and metabolically active. **Marital status:** In subset-1, most subjects were unmarried, i.e., 53.6% (134), whereas in subset-2 maximum were married, i.e., 62.3% (157). This may be because subjects engage more in traditional practices like *Upavasa* due to family or cultural influences after marriage. **Type of Diet:** It was observed that among those who do not practice *Upavasa* (Subset-1), i.e., 57.2% (143) were vegetarians. In contrast, 63.6% (159) of *Upavasa* practitioners (Subset-2) were vegetarians. This may be due to the reason that vegetarians have a stronger inclination towards religion and are more likely to choose religious practices like *Upavasa*. **Dietary habits:** It was observed that compared to subset-1, i.e., 55.2% (138), subset-2, 73.2% (183) subjects had more normal eating habits. This reveals that those practising *Upavasa* follow a more regular and balanced diet. **Appetite:** It was observed that in Subset-1 (no *Upavasa*), 75.6% (189) of the individuals reported normal appetite; in subset-2 (do *Upavasa*), 92.8% (232) reported normal appetite. This may be because *Upavasa*, for the short term, leads to *Amapachana*, which can improve appetite. **Thirst:** It was observed that among those who do not practice *Upavasa* (subset-1), 73.6% (184) reported normal thirst levels. In contrast, *Upavasa* practitioners had 81.2% (203) with normal thirst. This may be because subjects who practice *Upavasa* maintain their normal thirst levels by regular fluid intake. **Addiction:** It was observed that among those who did not practice *Upavasa* (Subset-1), 13.6% (34). In contrast, none of the *Upavasa* practitioners (Subset-2) reported any form of addiction. This may be because practices like *Upavasa* develop inner discipline and self-control, encouraging healthy lifestyle choices and discouraging addictive behaviours. **Sleep:** It was observed that among those who did not practice *Upavasa* (Subset-1), 69.6% (174) reported normal sleep. While in *Upavasa* practitioners (Subset-2), 71.6% (179) reported normal sleep but a higher level of disturbed sleep, i.e., 14.8% (37). This shows that mentally stressed people

opt more for religious practices like *Upavasa*. **Bowel habit:** In subset-1, i.e., 55.2% (166) had bowel regularity. Meanwhile, subset-2, 90.8% (227), had regular bowel movements. This indicates *Upavasa* improves digestive health, so subset 2 has more bowel regularity. **Assessment of Different Upavasa Practices** among 250 subjects: Maximum subjects (66.8%) do *Upavasa* because of their religious beliefs, (34.8%) subjects were practicing *Upavasa* for 12 hrs, (32.8%) were doing it once a month. Out of 250 (37.2%) subjects consume fruits and vegetables during *Upavasa*. Upon breaking *Upavasa*, 78.4% of subjects chose to eat cooked millet, green leafy vegetables or cereals, and 60% maintained their usual food intake after *Upavasa*. 51.2% experienced no change in hunger after *Upavasa*, and 44.4% felt better after doing *Upavasa*. **The following data represents various physiological and subjective responses to the Samyak Langhana by 500 healthy subjects:** On observing the data between two subsets *Vata visarga*, *Mutra Visarga*, *Purisha visarga*, *Gatra Laghava*,

Hridaya Shuddhi, *Kantha Shuddhi*, *Udgara Shuddhi*, *Ruchi* (for food), *Kshudha*, *Pipasa* showed highly significant results ($p < 0.001$) in subset-2, which comprised subjects practising *Upavasa*. This may be because *Upavasa* enhances *Agni*, which plays a key role in *Amapachana*, improves digestive capacity and induces the characteristics of *Langhana*. The *Sattvic* nature of subjects, nurtured by fasting/ *Upavasa*, motivates them to consume lighter and easily digestible foods, possibly driven by their religious beliefs. Together, these factors positively impacted their physical health. Also, an enhanced *Agni* and *Sattvic* diet helps reduce increased *Kapha Dosha* and *Guruta* (heaviness) of the body, which results in a marked decrease in *Tandra* and *Klama*, and this reduction was also highly significant ($p < 0.001$)
The overall lightness of the body contributed to the subjects' improved feeling of *Nirvyathe cha Antaratmani*, which was also statistically significant ($p = 0.002$).

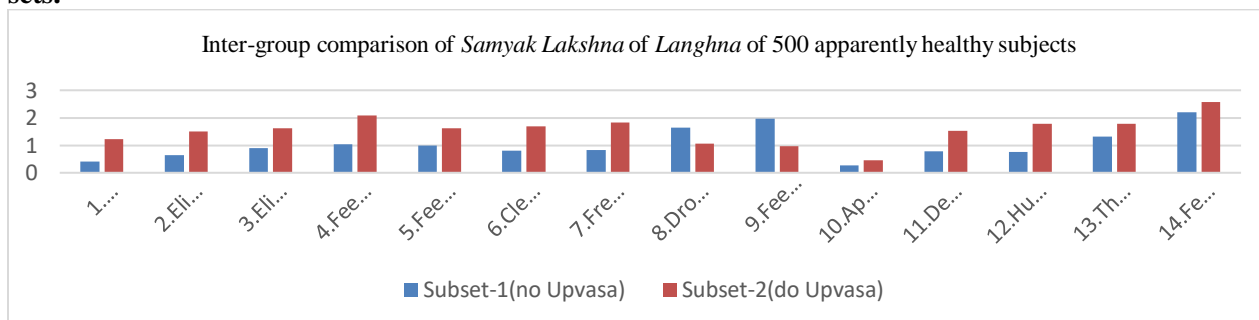
Inter-group comparison of Samyak Lakshana of Langhana of two subsets of population:

Table no.1 shows an Inter-group comparison of Samyak Lakshana of Langhana of two subsets of the population:

Lakshana of Samyak Langhana	SUBSET-1 (250 subjects who do not practice Upavasa)	SUBSET 2 (250 subjects who practice Upavasa)	MEAN DIFFERENCE	T	p	Significance
	MEAN	MEAN				
Vata Visarga (Elimination of entrapped flatus)	.416	.224	0.808	8978.000	0.001	highly significant
Mutra Visarga (Elimination of Urine)	.652	.508	0.856	6830.000	0.001	Highly significant
Purisha Visarga Elimination of Faeces	.908	.62	0.712	0649.000	0.001	Highly significant
Gatra Laghava (Feeling of	.048	.088	1.04	5541.000	0.001	Highly significant

Lightness in the body)							
<i>Hridaya Shuddhi</i> (Feeling of Lightness in the Epigastric region)	.984	.628	0.644	1805.000	0.001	Highly significant	
<i>Kantha Shuddhi</i> (Clearance of Throat)	.808	.688	0.88	7219.000	0.001	Highly significant	
<i>Udgara Shuddhi</i> (Purity in Eruc-tation)	.824	.82	0.996	5769.000	0.001	Highly significant	
<i>Tandra</i> (Drows-iness)	.652	.068	.584	2191.000	0.001	Highly significant	
<i>Klama</i> (Feeling of Exhaustion without exer-tion)	.972	.96	.012	8976.500	0.001	Highly significant	
<i>Sweda</i> (Appear-ance of Sweat)	.268	.460	0.192	8799.000	0.018	Significant	
<i>Ruchi</i> (Desire for Food)	.78	.536	0.756	9959.000	0.001	Highly significant	
<i>Kshudha</i> (Hun-ger)	.764	.782	1.018	8417.500	0.001	Highly significant	
<i>Pipasa</i> (Thirst)	.324	.792	0.468	5358.500	0.001	Highly significant	
<i>Nirvyathe cha antaratmani</i> (Feeling of well-being)	.2	.58	0.38	7721.000	0.002	Moderately sig-nificant	

The bar graph shows an inter-group comparison of Samyak Lakshna of Langhna in two population subsets.



DISCUSSION

The study revealed a significant disparity in the attainment of *samyak lakshana of langhana* between

the two subsets. Upon analysis, it was observed that the difference between subset-1 and subset-2 demonstrated a highly significant variation in terms of *Samyak lakshana of langhana*. It was observed that the subset-2 exhibits better *Vata visarga, Mutra*

Visarga, Purisha visarga, Gatra Laghava, Hridaya Shuddhi, Kantha Shuddhi, Udgara Shuddhi, Ruchi (for food), Kshudha, Pipasa as compared to subset-1. This may be because Upavasa enhances Agni, which plays a key role in Amapachana, improves digestive capacity and induces the characteristics of Langhana. The Sattvic nature of subjects, nurtured by fasting/Upavasa, motivates them to consume lighter and easily digestible foods, possibly driven by their religious beliefs. Together, these factors positively impacted their physical health. Also, an enhanced Agni and Sattvic diet helps reduce increased Kapha Dosha and Guruta (heaviness) of the body, which results in a marked decrease in Tandra and Klama, and this reduction was also highly significant ($p < 0.001$) in subset -2

The overall lightness of the body contributed to the subjects' improved feeling of Nirvyathe cha Antaratmani, which was also statistically significant ($p = 0.002$).

Strength and limitations: The strength of the study lies in incorporating the Ayurvedic concept, i.e., Samyaka lakshana of Langhana, practically bridging traditional Ayurvedic wisdom with the modern scientific understanding, which makes it unique and interdisciplinary. Including a large sample size and comparative analysis between the two groups enables more profound insights into variations in Upavasa (fasting) outcomes and identifying the significant differences between the two subsets. The considerable differences between subsets further indicate that the study has strong statistical validity and reveals meaningful findings. Assessing Samyaka Lakshana might require repeated observations or detailed feedback, increasing the complexity and duration of data collection. Age, gender, health conditions, and diet may influence how individuals manifest Samyak Lakshana of Langhana, making it difficult to generalise findings.

CONCLUSION

The study underscores the profound physiological and psychological benefits of Upavasa (fasting), highlighted by traditional Ayurvedic principles. The

findings reveal that individuals practising Upavasa experienced enhanced mental clarity, improved appetite regulation, and greater well-being. Physiological markers such as bowel regularity, thirst, and energy levels showed notable improvements compared to non-fasters. The attainment of Samyak Lakshana of Langhana demonstrates the effectiveness of Upavasa (fasting) in enhancing digestive health, promoting detoxification, and achieving balance in bodily functions. Fasting practices were more common among married individuals and vegetarians, indicating possible cultural, occupational, and dietary influences on Upavasa (fasting) habits.

By integrating Ayurvedic insights with contemporary research, this study bridges ancient wisdom with modern health sciences, showcasing the relevance and efficacy of Upavasa (fasting) as a sustainable, cost-effective approach to well-being.

Future research should aim to explore the long-term benefits of various Upavasa (fasting) protocols across diverse populations and investigate the mechanisms underlying their metabolic and psychological impacts. By doing so, Upavasa (fasting) can be further established as a vital component of preventive healthcare and holistic wellness regimens.

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