

A Survey study on the effect of Non suppression of Shoka as a Dharaneeya vega on Grahani Roga w.s.r to irritable bowel syndrome: A Preliminary Analysis

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Introduction

Dharaneeya vegas are classified into kayika, Vachika and Manasika. Among them Manasika vegas are Lobha, Shoka, Bhaya, Krodha, Maana, Nirlajja, Ershya, Atiragaam and Abidhya. Adharana of Dharaneeya vegas disturbs the homeostasis by vitiating manasika dosha, sharirik dosha and agni. Diseases are two types - sharirika vyadhi and manasika vyadhi. If a person is suffering from any sharirika vyadhi it could be converted into manasika vyadhis and vice versa. The disruption in manasika bhavas due to adharana of dharaneeya vega has its own effect on Agni.

Acharya Charaka has mentioned even salutary food taken in appropriate quantity does not get digested if the person is afflicted with manasika bhavas. Acharya Sushruta mentioned that Person afflicted with manasika bhavas if consumes food, does not undergo digestion properly.

Grahani Roga is the disease of gastrointestinal tract and it is often seen in day-to-day practice. It is one among the asta mahagadas. Even though all dharaneeya vega have their own role, some have profound role in Grahani rog. They are chinta, kama, krodha, shoka and bhaya. Shoka is one dharaneeya vega which is vata and pitta dosha predominant. Grahani roga is predominant in pitta and vata dosha and these doshas can be easily disturbed by adharana of dharaneeya vegas. The cardinal features of Grahani mentioned in the classics have similarities with the clinical features of irritable bowel syndrome (IBS) which is explained in modern science.

Aim

- To study the effect of non-suppression of shoka as dharaneeya vega on Grahani Roga w.s.r to Irritable bowel syndrome.

Objectives

- To observe the correlation between non-suppression of shoka as dharaneeya vega on Grahani w.s.r to Irritable bowel syndrome.
- To study the correlation between the signs and symptoms of Grahani Roga and Irritable bowel syndrome
- To assess the feasibility of conducting the survey.

Materials and Methods

- Study participants:** Participants who are fulfilling the inclusion criteria as mentioned below are selected for the study.
- Questionnaire:** Four sets of Validated questionnaires which assess the shoka, Sadness, Grahani and IBS with the different grading scales were used along with other basic demographic details.
- Study type:** Cross sectional study (Analytical)
- Study design:** Survey study.

Inclusion criteria

- Participants who are having shoka or grahani roga or IBS.
- Participants who are not suppressing shoka as a dharaneeya vegas.
- Participants of any sex who are aged between 21- 60 years.

Exclusion criteria

- Participants who are severely ill and bed ridden.
- Participants who are suffering from malignancies and chronic systemic diseases like uncontrolled hypertension, uncontrolled diabetes.
- Patients having anatomical deformity in digestive tract.

- Intellectually disabled and psychologically disabled person.

Methodology

- Consent of the person to participate in the survey was taken through consent forms in both regional and English language.
- Data was collected using interview method.
- After getting the responses through questionnaires, Results were analysed by appropriate statistical methods.

Results and Analysis

Table 1: Distribution of Gender along with its Descriptives

Gender	N	Mean	Std. Deviation	Std. Error Mean
Female	56	22.3214	5.29531	.70761
Male	44	21.1136	4.85710	.73224

Female participants constituted a slightly higher proportion of the study population (56%) than males (44%). The mean score was higher among females (22.32 ± 5.30) compared with males (21.11 ± 4.86), suggesting a marginally greater level of the measured variable among females.

Table 2: Independent Samples Test

t-test for Equality of Means				
IBS	t	df	Sig. (2-tailed)	Mean Difference
	1.174	98	.243	1.20779

There was no statistically significant difference in IBS scores between female and male participants ($t = 1.174$, $df = 98$, $p = 0.243$), indicating that gender did not significantly influence the IBS score in the present study.

Table 3: Distribution of Age along with its descriptives

Age	N	Mean	Std. Deviation	Std. Error
20-30	31	20.1613	4.47286	.80335
31-40	29	21.2069	5.21248	.96793
41-50	12	24.1667	4.78318	1.38078
51-60	28	23.1786	5.32676	1.00666
Total	100	21.7900	5.11740	.51174

The mean IBS score showed an increasing trend with advancing age, with the highest mean score observed in the 41–50-year age group (24.17 ± 4.78)

and the lowest in the 20–30-year group (20.16 ± 4.47). The overall mean IBS score was 21.79 ± 5.12

Table 4: One way ANOVA

Age	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	213.864	3	71.288	2.877	.040
Within Groups	2378.726	96	24.778		
Total	2592.590	99			

One way ANOVA was applied and a statistically significant difference in mean IBS scores was observed across the four age groups ($F = 2.877$, $df = 3,96$, $p = 0.040$), indicating that age was significantly associated with variations in IBS scores in the study population. The highest mean IBS score was observed in the 41–50-year age group, while the lowest was observed among participants aged 20–30 years.

Table 5: Distribution of Place along with its descriptives

	Place	N	Mean	Std. Deviation	Std. Error Mean
IBS	Urban	54	22.0185	5.72809	.77949
	Rural	46	21.5217	4.33968	.63985

Urban participants had a slightly higher mean IBS score than rural participants (22.02 ± 5.73 vs. 21.52 ± 4.34); however, statistical significance of this difference should be determined using an independent samples *t*-test.

Table 6: Independent Samples t test

t-test for equality of Means				
IBS	t	df	Sig. (2-tailed)	Mean Difference
	.482	98	.631	.49678

There was no statistically significant difference in mean IBS scores between urban and rural

participants ($t = 0.482$, $df = 98$, $p = 0.631$), indicating that place of residence was not significantly associated with IBS scores in the study population.

Table 7: Distribution of Diet and its Group statistics

	Diet	N	Mean	Std. Deviation	Std. Error Mean
IBS	Veg	35	21.7429	5.18109	.87576
	Mixed	64	21.8154	5.12315	.63545

Participants following a mixed diet had a marginally higher mean IBS score than those following a vegetarian diet (21.82 ± 5.12 vs. 21.74 ± 5.18). The difference was minimal, and its statistical significance should be assessed using an independent samples t -test.

Table 8: Independent samples test

t-test for equality of Means				
IBS	t	df	Sig. (2-tailed)	Mean Difference
	-.067	98	.947	-.07253

There was no statistically significant difference in mean IBS scores between vegetarian and mixed-diet participants ($t = -0.067$, $df = 98$, $p = 0.947$), indicating that dietary pattern was not significantly associated with IBS scores in the present study.

Table 9: Distribution of Addiction along with its Group statistics

Addiction	N	Mean	Std. Deviation	Std. Error mean
Yes	49	22.3469	4.78953	.68422
No	51	21.2549	5.40682	.75711

Participants with addiction showed a higher mean IBS score than those without addiction (22.35 ± 4.79 vs. 21.25 ± 5.41), with an observed mean difference of approximately 1.09 points. The statistical significance of this difference should be assessed using an independent samples t -test.

Table 10: Independent samples test

t-test for Equality of Means				
IBS	t	df	Sig. (2-tailed)	Mean Difference

	1.068	98	.288	1.09204
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Participants with addiction had a higher mean IBS score than those without addiction (22.35 ± 4.79 vs. 21.25 ± 5.41); however, the difference was not statistically significant ($t = 1.068$, $df = 98$, $p = 0.288$), indicating that addiction status was not significantly associated with IBS scores in the present study.

Table 11: Distribution of Married Life along with its descriptives

Marital Status	N	Mean	Std. Deviation	Std. Error
Married	82	22.0976	5.02244	.55464
Unmarried	12	19.5833	5.12495	1.47945
Separated_divorced	6	22.0000	6.22896	2.54296
Total	100	21.7900	5.11740	.51174

The mean IBS score varied across marital-status groups, with the highest mean observed among married participants (22.10 ± 5.02) and the lowest among unmarried participants (19.58 ± 5.12).

Table 12: One way ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66.454	2	33.227	1.276	.284
Within Groups	2526.136	97	26.043		
Total	2592.590	99			

No statistically significant difference was observed in mean IBS scores across married, unmarried, and separated/divorced participants ($F = 1.276$, $df = 2,97$, $p = 0.284$), indicating that marital status was not significantly associated with IBS scores in the present study.

Table 13: Distribution of Sleep pattern along with Group statistics

Sleep hours	N	Mean	Std. Deviation	Std. Error Mean
2-5hrs	39	23.5897	4.90283	.78508
6-9hrs	61	20.6393	4.95322	.63420

Participants with a sleep duration of 2–5 hours had a higher mean IBS score than those sleeping 6–9 hours (23.59 ± 4.90 vs. 20.64 ± 4.95), suggesting that shorter sleep duration may be associated with higher IBS scores. The statistical significance of this difference should be assessed using an independent samples *t*-test.

Table 14: Independent Samples t test

t-test for Equality of Means				
IBS	t	df	Sig. (2-tailed)	Mean Difference
	2.917	98	.004	2.95040

Participants sleeping 2–5 hours had significantly higher mean IBS scores than those sleeping 6–9 hours (23.59 ± 4.90 vs. 20.64 ± 4.95 ; $t = 2.917$, $df = 98$, $p = 0.004$), indicating a significant association between shorter sleep duration and higher IBS scores

Table 15: Chi Square test Statistics

Sleep hours	Test results
Chi Square	4.840
Df	1
Asymp. sig	.028

A statistically significant association was observed for sleep duration ($\chi^2 = 4.840$, $df = 1$, $p = 0.028$), indicating that the distribution of participants across the sleep-duration categories was significantly different.

Table 16: Distribution of Shoka among the participants along with Group statistics

Level of Depression	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
9-16	17	15.0000	3.20156	.77649	10.00	24.00
17-24	54	20.9444	2.77058	.37703	14.00	26.00
25-32	29	27.3448	3.29801	.61242	21.00	32.00

Total	100	21.7900	5.11740	.51174	10.00	32.00
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A progressive increase in the mean IBS score was observed with increasing levels of depression, from 15.00 ± 3.20 in the 9–16 category to 27.34 ± 3.30 in the 25–32 category. This finding suggests a positive relationship between depression level and IBS score, with higher depression scores being associated with higher IBS scores.

Table 17: ANOVA

IBS	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1717.205	2	858.602	95.140	.000
Within Groups	875.385	97	9.025		
Total	2592.590	99			

A highly significant difference in mean IBS scores was observed across the three depression-level categories ($F = 95.140$, $df = 2,97$, $p < 0.001$). Mean IBS scores increased progressively with increasing depression levels, suggesting a significant positive association between depression severity and IBS scores in the study population

Table 18: Post hoc Scheffe test

Shoka	N	Subset for alpha = 0.05		
		1	2	3
9-16	17	15.0000		
17-24	54		20.9444	
25-32	29			27.3448

Post-hoc analysis demonstrated a statistically significant stepwise increase in mean IBS scores across the Shoka categories. The mean IBS score increased from 15.00 in the 9–16 category to 20.94 in the 17–24 category and 27.34 in the 25–32 category, with each group forming a distinct homogeneous subset at $\alpha = 0.05$. This indicates that increasing Shoka severity was significantly associated with progressively higher IBS scores.

Discussion

The present study explored the relationship between IBS scores and selected sociodemographic, lifestyle and psychological factors, with particular emphasis on Shoka as a Dharaneeya Vega. Among the 100 participants, females constituted a slightly higher proportion than males (56%), and although the mean IBS score was higher among females than males (22.32 ± 5.30 vs. 21.11 ± 4.86), the difference was

not statistically significant ($t = 1.174$, $p = 0.243$), suggesting that gender did not significantly influence IBS scores in the present sample. Similarly, no significant differences were observed according to place of residence (urban vs. rural; $t = 0.482$, $p = 0.631$), dietary pattern (vegetarian vs. mixed diet; $t = -0.067$, $p = 0.947$), addiction status ($t = 1.068$, $p = 0.288$), or marital status ($F = 1.276$, $p = 0.284$). Although participants with addiction and those from urban areas showed slightly higher mean IBS scores, these differences were not statistically significant. Age, however, demonstrated a significant difference in IBS scores across the four age groups ($F = 2.877$, $p = 0.040$), with the highest mean score observed in the 41–50-year group (24.17 ± 4.78) and the lowest in the 20–30-year group (20.16 ± 4.47). A significant association was also observed with sleep duration, wherein participants sleeping 2–5 hours had significantly higher IBS scores than those sleeping 6–9 hours (23.59 ± 4.90 vs. 20.64 ± 4.95 ; $t = 2.917$, $p = 0.004$). This finding may be explained by the close interaction between sleep, stress regulation, autonomic activity and gastrointestinal functioning.

The most prominent finding was observed in relation to Shoka. IBS scores increased progressively with increasing Shoka-score categories, from 15.00 ± 3.20 in the 9–16 category to 20.94 ± 2.77 in the 17–24 category and 27.34 ± 3.30 in the 25–32 category. One-way ANOVA demonstrated a highly significant difference among the three groups ($F = 95.140$, $p < 0.001$), and Scheffé post-hoc analysis showed that each category formed a distinct homogeneous subset at $\alpha = 0.05$. This progressive increase suggests that greater severity of Shoka was associated with higher IBS scores.

From the Ayurvedic perspective, Shoka is considered a Dharaneeya Vega, and persistent psychological disturbance may adversely affect the equilibrium of Manas and subsequently influence bodily functions, including digestion and bowel regulation. In the context of Grahani, impairment of Agni and disturbed gastrointestinal functioning may be understood as being influenced by psychological factors. From the modern perspective, this association may be explained through the bidirectional gut–brain axis, wherein psychological stress and emotional disturbances can influence autonomic nervous system activity, hypothalamic–pituitary–adrenal axis responses, gastrointestinal motility, visceral sensitivity and symptom perception. The concurrent association of higher Shoka scores and shorter sleep duration with higher IBS scores therefore supports a biopsychosocial understanding of IBS and provides a possible conceptual link between the Ayurvedic understanding of Dharaneeya Vega and contemporary gut–brain mechanisms.

However, the cross-sectional design, relatively small sample size and unequal subgroup sizes limit

causal interpretation. Further longitudinal studies with larger samples are advised to come to conclusion Overall, the findings indicate that Shoka represents an important psychological aspect correlate of IBS scores in the present study and warrant further investigation within the Ayurvedic framework of Dharaneeya Vega.

Conclusion

A progressive increase in IBS scores was observed with increasing Shoka levels, with the highest scores among participants with higher Shoka severity. These findings suggest that psychological factors, particularly Shoka as a Dharaneeya Vega, may have an important role in the manifestation and severity of IBS. The findings provide preliminary support for the Ayurvedic concept of the mind–body relationship in Grahani/IBS and highlight the need for further studies with larger samples and longitudinal designs.

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