



EFFECT OF GASTRO HEPATIC PACK AND YELLOW COLOURLIGHT ON CONSTIPATION INDIVIDUALS- PRE AND POST STUDY

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ABSTRACT:

BACKGROUND AND OBJECTIVES: Constipation is a condition in which a person has fewer than three bowel movements per week or stools that are hard, dry making them painful or difficult to pass. Many cases of constipation can be treated by supplementing dietary fiber and fluid intake, with less attention to non-medical forms of intervention. Gastro-hepatic pack is a treatment modality in hydrotherapy that uses combination of hot and cold treatment. Chromotherapy is the method of treatment that uses the colours to treat. Yellow colour light have the laxative effect on the body. This study is conducted to see the effect of gastro-hepatic pack and yellow colour light on constipation.

AIM: To know the impact of gastro-hepatic pack and yellow colour light on constipation

MATERIALS AND METHODS: 30 patients of both male and female genders were entitled for the study who fulfilled the inclusion criteria were selected for the study. They were recruited from SDM Yoga and Nature cure hospital. The volunteers were given 7 days of intervention of gastro-hepatic pack and yellow colour light. Assessments were made on the day of admission and discharge. The assessment tools used are constipation scoring system, PAC-QOL questionnaire.

RESULTS: After the treatment with gastro-hepatic pack and yellow colour light there was highly significant changes in intensity of bowel movements and satisfaction

CONCLUSION: The study results suggest that gastro-hepatic pack and yellow colour light can be helpful in patients with constipation.

KEY WORDS: Gastro-hepatic pack, chromotherapy, constipation.

1.INTRODUCTION

Constipation is a condition in which a person has fewer than three bowel movements per week or stools that are hard, dry making them painful or difficult to pass. ^[1] Failure of voiding of feces produces discomfort in body which is known as constipation. ^[2] This may be because colon absorbed more amount of water from the food. When the food moves slower in the colon more water gets absorbed from it which leads to hard feces. Sometimes patients may complain of straining or sensation of incomplete evacuation. ^[3] A total of 12% to 30% people are estimated to be suffering from constipation. In majority of population despite the irregular bowel movements no organic cause can be identified. ^[4] Constipation may be the end result of

several disorders; in the absence of specific cause, it is not necessary to investigate every individual with constipation.^[5] There are several causes for constipation. One among the most common causes includes the suppression of the defecation reflex when it is excited or over usage of the laxatives to take place in bowel function.^[6] Other causes includes lack of dietary fiber in food, less intake of water, drugs like opiates, some motility disorders, neurological diseases, old age and lack of physical activity. Without any biological markers indicating the systemic morbidity diagnosis of constipation is mainly done by symptom criteria. The recently proposed Rome criteria which is used for diagnosing constipation differentiates idiopathic constipation from constipation predominant irritable bowel syndrome (IBS). The difference between constipation and IBS is arbitrary because the chief symptom that includes pain or discomfort^[7]. Naturopathic medicine considers constipation as the root cause for all the diseases.^[8] Naturopathy is a system of man building in harmony with the constructive principles of nature on physical, mental, moral and spiritual planes of living and consists of non-invasive treatment modalities like Diet Therapy, Fasting Therapy, Mud Therapy, Hydrotherapy, Massage Therapy, Acupressure, Acupuncture, Chromo Therapy, Air Therapy and Magnet Therapy^[9]. Hydrotherapy is one of the important parts of Naturopathy treatment which has been proven beneficial in cardiovascular, hemodynamic, cellular immunity and psychological parameters.^[10] Gastro-hepatic pack is a treatment modality in hydrotherapy that uses combination of hot and cold treatment. The hot and cold treatment modality has opposite effects on tissue metabolism, blood flow, inflammation, oedema and connective tissue extensibility.^[11] chromo therapy is one of the therapies which uses the effect of different colour on the body. each colour has different effect on body.^[12] Naturopathic medicine is a unique, whole system of medicine that emphasizes patient wellness through delivery of health promotion counselling, clinical practice. All health care systems today are treatment-based modalities which treat diseases symptomatically- the average medical practitioner seeks to remove the symptoms of disease rather than its basic cause within the system.^[9] Naturopathy is a distinct type of primary care medicine that blends age-old healing traditions with scientific advances and current research. It is guided by a unique set of principles that recognize the body's innate healing capacity, emphasize disease prevention, and encourage individual responsibility to obtain optimal health.^[10]

2.AIMS AND OBJECTIVES

2.1 AIM: To study the Effect of gastro hepatic pack and yellow colour light on constipation.

2.3 OBJECTIVES: To find out the effect of gastro-hepatic pack and yellow colour light on constipation individuals which includes

- Constipation scoring scale
- PAC-QOL.

3.REVIEW OF LITERATURE: Gastro-hepatic pack is a treatment modality in hydrotherapy that uses combination of hot and cold treatment. The hot and cold treatment modality has opposite effects on tissue metabolism, blood flow, inflammation, edema and connective tissue extensibility. Gastro-hepatic pack influences not only the stomach and liver, but also the spleen and the pancreas through the intimate association of these organs. The fomentation is applied anteriorly from the fourth rib to the umbilicus, extending to the axillary line on each side, while a cold bag at least eighteen inches long is applied to the dorsal and lumbar spine.^[11] **CHROMOTHERAPY:** Chromotherapy is a method of treatment modality in naturopathy which uses colours to cure disease. It is a centuries old concept used successfully over the years to cure diseases. Colours have different effects on body. Yellow colour has the laxative effect on body which helps in treating constipation.^[12] **CONSTIPATION:** Constipation is a disorder in the gastrointestinal tract, which can result in the infrequent stools, difficult stool passage with pain and stiffness. Acute constipation may cause closure of the intestine, which may even require surgery.^[13] It is worth noting that there is currently no ideal definition for constipation; thus, history and physical examination can be considered the main initial approaches. Many definitions are described by using a self-reported constipation and the formal criteria. Many definitions of chronic constipation are related to scientific considerations such as secondary causes (medications), neurological, or systemic diseases. However, it is considered primary or idiopathic.^[14] Pathogenesis is multifactorial with focusing on genetic predisposition, socioeconomic status, low fiber consumption, lack of adequate fluid intake, lack of mobility, disturbance in the hormonal disturbance, side effects of medications, or anatomy of the body, etc.^[14] Constipation is a common gastrointestinal problem, which causes many expenses for the community with an estimated prevalence of 1% to 80%, worldwide,^[15] where the condition is characterized by a wide geographical variation. It is noteworthy that the varieties of definitions have led to a wide range of prevalence. Chronic constipation is a complicated condition among older individuals, which is characterized by difficult stool passage.^[16] In this regard, this condition has a

close relationship with the patients' quality of life and consuming health resources [15,16]. In this regard, we aimed to perform an integrative review of the literature to provide a better understanding of the pathophysiology of chronic constipation. As a matter of fact, appropriate understanding of this disease can play a key role in managing disease and planning better treatments. The main sources selected from bibliographic databases include PubMed, Scopus, Science Direct, and Google Scholar, etc. Details of the keywords were applied to find the best resources. This study is a review article dealing with chronic constipation, which is a topic with several causes.

4. METHODOLOGY

4.1 SUBJECTS: -

A total of 50 subjects with age group between 18-35 years were recruited for the study. Subjects who fulfilled inclusion criteria were apprised about the purpose of study and their rights as a research subject.

4.2 SOURCE OF THE DATA:

The subjects were recruited from the SDM College of naturopathy and yogic sciences, Ujire and SDM Nature cure hospital, Dharmasthala. Out of 50 subjects, 30 were recruited for the study based on inclusion and exclusion criteria.

4.3 ETHICAL CONSIDERATION: -

Signed informed consent will be obtained from all the participants after an appraisal about the study protocol. Pre and post data is collected for every subject. Pre data is collected before giving the intervention and post data is collected after the intervention. The approval from the institutional ethics committee will be taken.

4.4 CRITERIA FOR DIAGNOSIS

ROME 4 CRITERIA: -

Must have 2 or more of the following, at least 25% of the time: -

For ≥ 3 months prior with symptom onset ≥ 6 months ago

- ❖ Straining
- ❖ Lumpy or hard stools
- ❖ Form 1 or 2 on the Bristol Stool Form Scale
- ❖ Sensation of incomplete evacuation
- ❖ Sensation of anorectal obstruction/blockage
- ❖ Manual maneuvers to facilitate defecation
- ❖ Less than 3 spontaneous bowel movements per week

Must have both of the following:

- ❖ Loose stools rarely present without use of laxatives
- ❖ Do not meet Rome 4 criteria for IBS

4.5 Inclusion criteria:

- ❖ Age between 18 – 35 years
- ❖ Fulfilling ROME IV criteria for constipation
- ❖ Without drugs for constipation
- ❖ Gender both males and females

4.5 Exclusion criteria

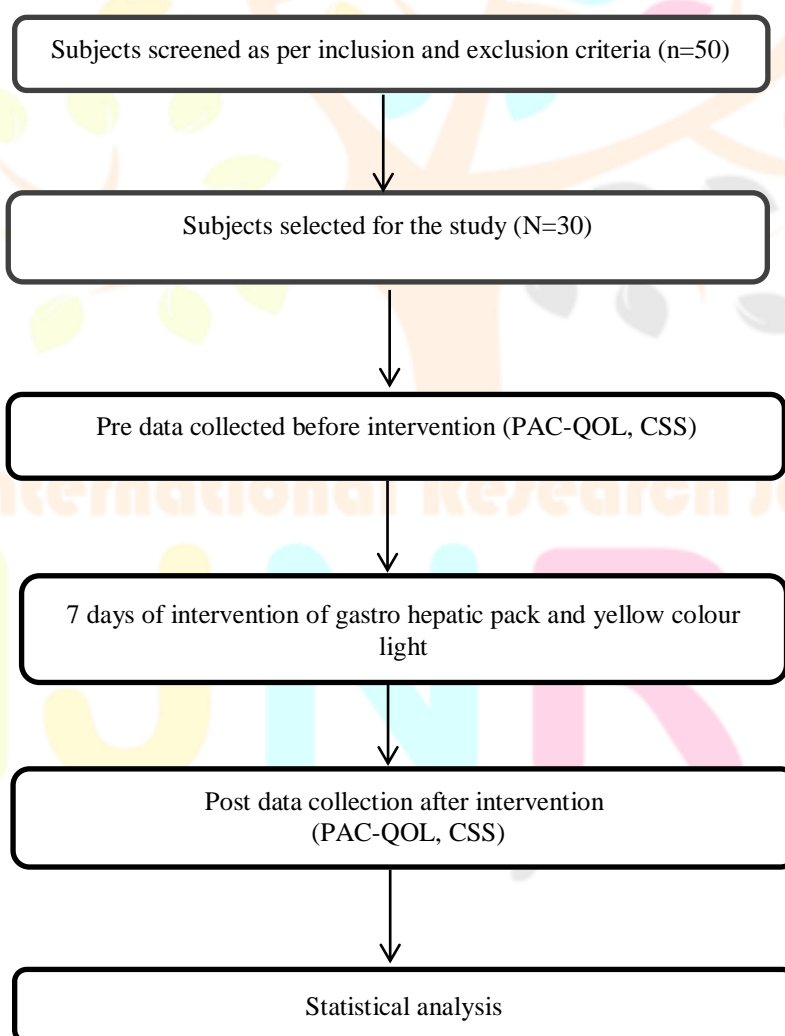
- ❖ Subjects with other chronic disease e.g.: - Hemorrhoids, IBD, peptic ulcers.
- ❖ Females under menstruation
- ❖ Patients consuming alcohol and nicotine
- ❖ Pregnancy

4.7 TYPE OF STUDY: The Type of Study Is Pre and Post Data Evaluation of Individuals Gastric Motility and The Effect of Gastro Hepatic Pack and Yellow Colour Light On Constipation Individuals.

4.8 Sample size: Total number of subjects (n) = 30

4.9 Method: This study was a randomized control study on subjects who attended the SDM nature cure hospital, Shantivana, Dharmasthala. The study Protocol was approved by the Research committee of SDM college of Naturopathy and Yogic Sciences, Ujire, Karnataka. The purpose of the study was explaining to all participants by researchers and all recruited subjects had given informed (signed) consent. 30 subjects of both sexes aged between 18-35 were included according to other inclusion and exclusion criteria. Subjects underwent GH Pack and Yellow colour therapy will be continued for 7 days. Pre-data is collected at 1st day and post data are collected on 7th day. The collected data is compared and systematically analyzed.

4.10 ILLUSTRATION OF STUDY PLAN:



6.Intervention: -

Gastro-hepatic pack: The hot water bag is kept on the abdominal region, covering the epigastric region, left and right hypogastric region, left and right lumbar region and umbilical region. The ice bag covers the region of lumbar vertebrae L2, L3, L4 and L5.

The treatment is administered in supine lying position, where the hot fomentation bag is kept over the abdominal region and then the ice bag on lower back region. The patients are

then covered with cotton cloth and wrapped with woolen blanket. The duration of treatment is 20 minutes.
Chromotherapy: Yellow colour light is made to expose over the abdomen region for 10 mins.

7. Data extraction: Data were collected as self-reported observations using primary outcomes and secondary outcome variables. Baseline data were obtained on the first day before starting intervention and post data collected in 7 th day after intervention . Data were organized in Microsoft Excel sheets (version 2010)

8. RESULTS: EFFECT OF GASTRO HEPATIC PACK AND YELLOW COLOUR LIGHT ON CONSTIPATION

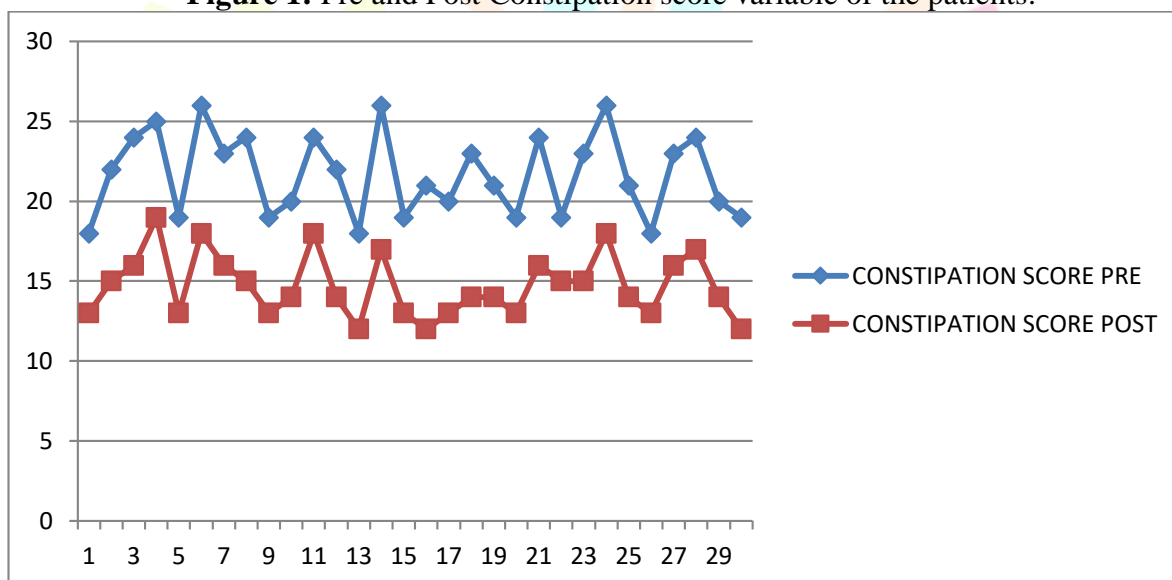
H₀: There is no significant difference between the levels of the variable before and after treatment in the patients.

H₁: There is a significant difference between the levels of the variable before and after treatment in the patients.

Table 1: Paired Samples Statistics on Constipation Score variable

	Variable	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Pair	Constipation Score_pre	30	21.67	2.591	29.559	29	.000
	Constipation Score_Post	30	14.73	1.982			

Figure 1: Pre and Post Constipation score variable of the patients.



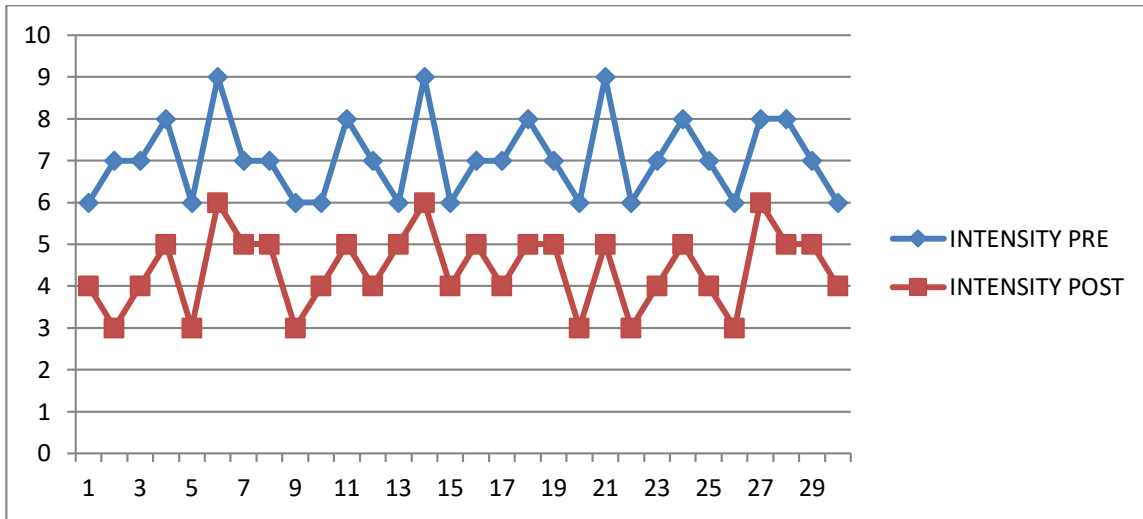
From above table we observe that p-values are lesser than 0.05. Hence, we rejected the null hypothesis at 5% level of significance, and it can be concluded that there is a significant difference between the level of variable before and after the treatment in the patients.

I.

Table 2: Paired Samples Statistics on Intensity variable

	Variable	N	Mean	Std. Deviation	T	DF	Sig. (2-Tailed)
Pair	Intensity- Pre	30	7.07	.980	22.100	29	.000
	Intensity-Post	30	4.40	.932			

Figure 2: Pre and Post intensity variable of the patients

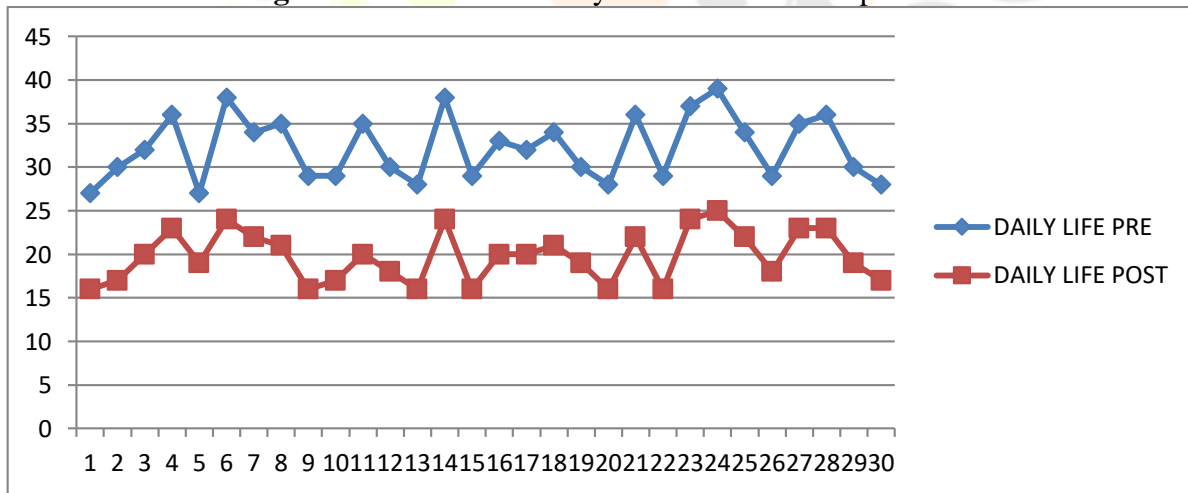


From above table we observe that p-values are lesser than 0.05. Hence, we rejected the null hypothesis at 5% level of significance, and it can be concluded that there is a significant difference between the level of variable before and after the treatment in the patients.

Table 3: Paired Samples Statistics on Daily life variable

Pair	Variable	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
	Daily Life_Pre	30	32.23	3.674			
Daily life Post	30	19.80	2.917	50.201	29	.000	

Figure 3: Pre and Post daily life variable of the patients

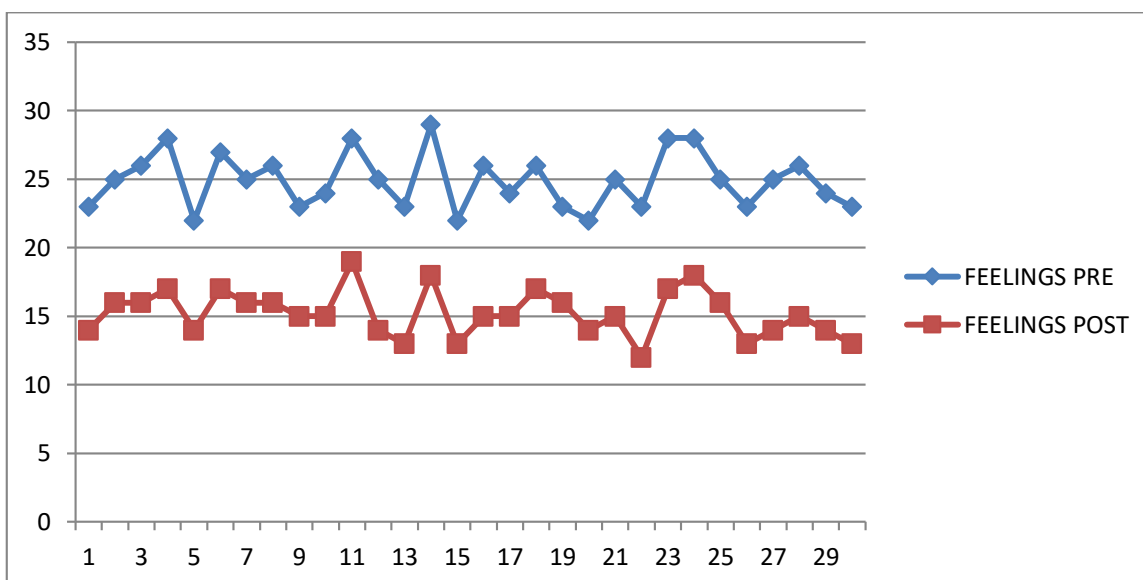


From above table we observe that p-values are lesser than 0.05. Hence, we rejected the null hypothesis at 5% level of significance, and it can be concluded that there is a significant difference between the level of variable before and after the treatment in the patients.

Table 4: Paired Samples Statistics on Feelings variable

Pair	Variable	N	Mean	Std. Deviation	T	DF	Sig. (2-Tailed)
	Feelings-pre	30	24.90	2.023			
Feelings-post	30	15.23	1.716	48.426	29	.000	

Figure 4: Pre and Post Feelings of the patients

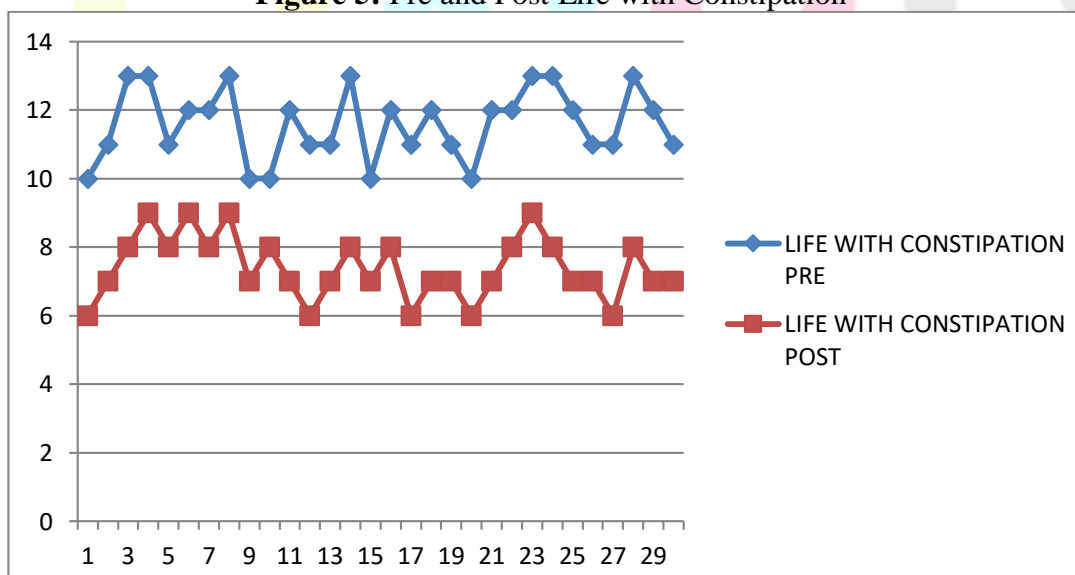


From above table we observe that p-values are lesser than 0.05. Hence, we rejected the null hypothesis at 5% level of significance, and it can be concluded that there is a significant difference between the level of variable before and after the treatment in the patients.

Table 5: Paired Samples Statistics on Life with Constipation

Pair	Variable	N	Mean	Std. Deviation	T	DF	Sig. (2-Tailed)
	Life with C-Pre	30	11.60	1.037	28.571	29	.000
	Life with C - Post	30	7.40	.932			

Figure 5: Pre and Post Life with Constipation

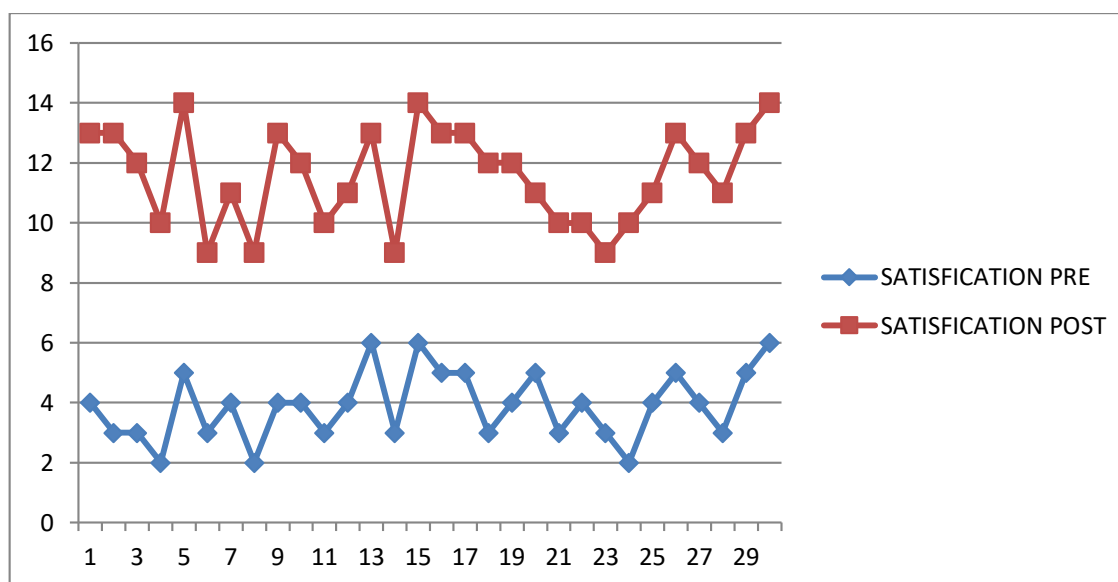


From above table we observe that p-values are lesser than 0.05. Hence, we rejected the null hypothesis at 5% level of significance, and it can be concluded that there is a significant difference between the level of variable before and after the treatment in the patients.

Table 6: Paired Samples Statistics on satisfaction

	Variable	N	Mean	Std. Deviation	T	DF	Sig. (2-Tailed)
Pair	Satisfaction-Pre	30	3.90	1.155	-39.565	29	.000
	Satisfaction-Post	30	11.57	1.612			

Figure 6: Pre and Post satisfaction of the patients



From above table we observe that p-values are lesser than 0.05. Hence, we rejected the null hypothesis at 5% level of significance, and it can be concluded that there is a significant difference between the level of variable before and after the treatment in the patients.

9. Acknowledgment

would foremost like to express my deep sense of gratitude to our beloved President **Dr. D. Veerendra Hegde** for his valuable support to the system of Yoga and Naturopathy.

10. DISCUSSION

The aim of present study was to evaluate the effects of gastro-hepatic pack and yellow colour light on constipation. The results showed that there was a significant reduction in post CSS, PAC-QOL as compared to pre variables ($P < 0.05$). The instruments measure intensity, daily life, feelings, life with constipation, satisfaction. The symptoms of constipation including infrequent bowel movements, straining, sense of incomplete evacuation, abdominal bloating & hard consistency have been found to be significantly reduced after gastro-hepatic pack and chromo therapy. Initial therapeutic approach to primary constipation, regardless of etiology, consists of diet and lifestyle changes such as encouraging adequate fluid and fiber intake, regular exercise, and dietary modification. Naturopathy being the drugless system of medicine, comprises of many treatment modalities including hydrotherapy, mud therapy, acupressure and acupuncture, diet therapy, massage therapy, chromo and magneto therapy, to eliminate the root cause of disease. The naturopathic power of treating the disease is to stimulate the healing power of the body and treat the underlying cause of disease. ^[9,10]

The Gastro-hepatic pack, as the hot and cold pack is, one of the most powerful known means of controlling the movement of blood through the abdominal viscera. The heating pack depends on its special features upon the anatomical fact that the collateral relation between the arteries and veins with internal parts does not closely coincide as regards the location of the related vessels in the skin, thus making possible the

simultaneous application of two different procedures differing in method, but assisting each other. It acts both reflexly and derivatively^[11,17] A cold application applied to one cutaneous surface causes contraction of the vessels of the associated internal organ through stimulation of its controlling vasomotor centers, while the hot pack applied to another cutaneous surface, the vessels of which are collaterally related to those of the part, drain off a portion of blood into the dilated cutaneous veins and arteries.^[17] The movement of blood is enhanced through the affected part, thus insuring a constant supply of oxygen and fresh nutrients. This greatly facilitates the healing process, which is essential to improve digestive health and helps in treating constipation.^[18]

Chromo therapy is the science of using colours to adjust body vibrations to frequencies that results in health and harmony. Each colour possesses frequencies of a specific vibration, and each vibration is related to different physical symptoms. Yellow colour has been used to purify the skin, strengthen the nervous system, assist metabolism, helps with indigestion, and treating constipation.^[12]

11. CONCLUSION

The study shows improvement on PAC-QOL and CSS questionnaire after the intervention with gastro-hepatic pack and yellow colour light. Hydro therapy and chromo therapy being a lifestyle intervention can be effective in the treatment of constipation which is inexpensive, safe, and easy method when done under proper supervision.

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