



Clinical Study on Effectiveness of Rutu Haritaki (*Terminalia chebula* & Honey) on Quality of Life (WHO- QOL BREF) among Healthy Subjects in Vasanta Rutu (Spring Season)

Gurubasavaraj Yalagachin¹, T.B.Tripathy², M.B.Kavita³, Shivakumar⁴

Ph.D scholar and Assistant Professor¹, Professor², Associate Professor³, Associate Professor⁴

Department of Swasthavritta, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan- 573201, Karnataka, India.

Correspondence Email: yogaayu.guru@gmail.com

ABSTRACT

Quality of life is a tool designed by WHO to assess subjective wellbeing of an individual through a standardized questionnaire of 26 questions relating to 04 domains namely Physical health, Psychological health, Social relationships and environment. Ayurveda emphasizes on Rasayana (Rejuvenation) among apparently healthy individuals. Rutu Haritaki is one such concept to administer Haritaki (*Terminalia chebula*) with specific adjuvant (Anupana) as per season (Rutu). In the current clinical study, healthy volunteers were administered with Haritaki with Madhu (Honey) in vasanta Rutu and their QOL was assessed and it was compared with QOL of control group. Objective: To assess the QOL of healthy volunteers to study the effectiveness of Rutu Haritaki among them. Materials & methods: The study was single blind, sampling done conveniently, controlled, comparative, Pre & post test designed. 180 apparently healthy subjects were screened for the features of Health. 150 subjects were divided into control and trial group of 75 each by convenient sampling. Trial group subjects were administered with 6gms of Haritaki churna with 12 ml of Madhu at bed time for 60 days of duration of the Vasanta Rutu while the other group was kept as control without any intervention. WHO QOL BREF questionnaire was used to assess quality of life in both the groups before and after the study period of 60 days. Results: In control group (N=75), the mean score of all four domains of QOL was 65.59 before the beginning of study period and 67 after the completion of study period. In trial group (N=75), the mean score of all four domains of QOL was 70.61 before the intervention and 74.27 after the completion of study period. Conclusion: The mean score of all four domains of QOL was considerably much better after the completion of the study period in the trial group compared to the control group.

Keywords: Haritaki, Quality of life, WHO QOL BREF

Received 15.11.2021

Revised 04.01.2022

Accepted 23.01.2022

INTRODUCTION

In the context of the culture and value system in which a person lives, quality of life is defined as an individual's perception of where they stand in life in respect to their goals, aspirations, standards, and concerns. The primary objective of developing a questionnaire on quality of life is to produce an evaluation of quality of life that can be applied in a variety of cultural contexts all over the world [1]. According to Ayurvedic belief, Chaya and Prakopa become unbalanced when the seasons change (accumulation and aggravation). Earlier studies were reported on Varsha Ritu (monsoon) which is the season with the least Bala (strength), highest Tridosha vitiation, and weakest Agni (condition of digestion and metabolism). We explore ways to lessen Dosha vitiation and promote Agni by strengthening Vyadhikshamatva (immunity). Haritaki (*Terminalia chebula* Retz) is described as a Rasayana in the Laghutrayi-Bhavaprakasha (anti-aging). Rituharitaki's simplicity, low cost, and ease of administration make it a promising preventive medicine for seasonal Varsha Ritu epidemics. Earlier studies found seasonal changes in healthy people's liver function tests, cholesterol levels, etc. Different objective signs may disclose Tridosha's physiological imbalance. Honey and Haritaki eat together, according to Varsha Ritu. Current research concentrated on Vasanta Rutu (Spring) combining the Agnivardhana (appetiser) and Tridosha Shamana (cure) features of Haritaki and Honey, to effectively manage Agni hypofunctioning, and Tridosha vitiation [2]. The season known as Vasanta, which corresponds to spring, is considered by Ayurveda to be the most beneficial time for detoxification. Honey, on the other hand, helps to control the digestive fire, which in turn brings the kapha dosha under control [3]. To assess the QOL of healthy volunteers to study the effectiveness of Rutu Haritaki among them.

MATERIAL AND METHODS

Source of data: Apparently healthy subjects from OPD of Sri Dhamasthala Manjunatheshwara college of Ayurveda and Hospital, Hassan.

Method of collection of data (including sampling procedure, if any): Survey: 180 apparently healthy subjects were screened for the features of Health.

Table: 1 WHOQOL-BREF domains

Domain	Facets incorporated within domains
1. Physical health	<ul style="list-style-type: none"> • Activities of daily living • Dependence on medicinal substances and medical aids <ul style="list-style-type: none"> • Energy and fatigue • Mobility • Pain and discomfort • Sleep and rest • Work Capacity
2. Psychological	<ul style="list-style-type: none"> • Bodily image and appearance • Negative feelings <ul style="list-style-type: none"> • Positive feelings • Self esteem • Spirituality / Religion / Personal beliefs • Thinking, learning, memory and concentration
3. Social relationships	<ul style="list-style-type: none"> • Personal relationships <ul style="list-style-type: none"> • Social support • Sexual activity
4. Environment	<ul style="list-style-type: none"> • Financial resources • Freedom, physical safety and security • Health and social care: accessibility and quality <ul style="list-style-type: none"> • Home environment • Opportunities for acquiring new information and skills • Participation in and opportunities for recreation / leisure activities • Physical environment (pollution / noise / traffic / climate) • Transport

Criteria for selection of subjects:

INCLUSION CRITERIA:

Individuals who have not fallen sick since one month before Vasanta Rutu

Healthy Volunteers aged 20 to 50 years.

EXCLUSION CRITERIA:

Persons are on chronic medications for systemic illness

Pregnant and Lactating Women

Individuals with Low BMI (below 18 Kg/m²)

Duration of the study: 60 days for both study and control groups.

Follow up: Nil

Grouping: Apparently healthy individuals who fulfilled inclusion criteria and given consent to participate in the study were conveniently divided into Control (Group-01) and Trial group(Group-02) of 75 subjects in each group.

Intervention:

The 75 subjects of Group-01 (Control group) were kept as control without any intervention.

The 75 subjects of Group-02 (Trial Group) were advised to consume 06gms of Haritaki Churna and 12 ml of Madhu in the morning in empty stomach for 60 days of Vasanta Rutu.

Medicine Name: Haritaki Churna and Madhu

Study Design:

All the participating subjects were assessed for quality of life with WHO QOL BREF questionnaire grading before study and after the completion of Vasanta Rutu period of 60 days.

Assessment Criteria: Health status was analyzed from the score obtained by the questionnaire of WHOQOL-BREF (WHO Quality of Life-Bref) [1].

Statistical Calculation: Manual calculation was done using response sheet by converting raw scores of responses to transformed scores [4].

RESULTS

Gender wise Distribution: Among 75 members of Control group 56 (74.67%) were females and 19 were male (25.33%) where as in the trial group 42 (56%) were females and 33 (44%) were males.

Age wise distribution: Control group of 75 subjects included majority of 21-30 year age group members i.e. 63(84%) followed by 06 members (08%) of 41-50 years age group. Trial group of 75 subjects included 46(61.33%) subjects of 21-30years age group, followed by 11 subjects (14.66%) were of 41-50 years age group.

Marital status wise distribution: Among 75 subjects of the control group, 59 (78.66%) were unmarried and 15 (20%) of them were married. Among 75 subjects of the trial group, unmarried & married subjects were equal in number i.e. 37 (49.33%) .

Occupation wise distribution: Students were the majority with 60 (80%) number among 75 control group subjects followed by employees 12(16%) and House makers 02 (2.66%) and lastly business class 01 (01.33%). Trial group comprised of 41students (54.66%), 33 employees (44%) & business class 01 (01.33%).

Locality wise distribution: Control group included subjects from urban region in more numbers i.e., 57 (76%) and remaining 18 subjects (24%) were from rural region. Trial group also witnessed the majority of subjects from urban region 52 (69.33%) and remaining 23 subjects 23 (30.66) were from rural region.

Education wise distribution: Both groups included 100% literates.

Socio economic Status wise distribution: Control group had 38 (50.66%) upper middle class subjects, 31 (41.33%) subjects of middle class 06 subjects (08%) represented upper class. Trial group had 43 (57.33%) upper middle class subjects, 31 (41.33%) subjects of middle class 03 subjects (04%) represented upper class.

Religion wise distribution: Control group represented 72 (96%) Hindus, 02 (02.66%) Christians and 01 (01.33%) Muslim subjects and Trial group represented 71 (94.66%) Hindus, 02 (02.66%) Muslim and 02 (02.66%) Christian subjects.

Food Type wise distribution: Mixed diet consuming subjects were 39 (52%) and remaining 36(48%) subjects were vegetarians in the control group. Whereas the trial group had 48 (64%) subjects were mixed diet consumers and remaining 27(36%) subjects were vegetarians.

Agni wise distribution: Control group had 43 (57.33%) subjects having Vishamagni , 22 (29.33%) subjects of Sama Agni, 08 (10.66%) among them were having Teekshna Agni and remaining 02 (02.66%) subjects had Mandagni. Trial group had 39 (52.33%) subjects having Vishamagni , 19 (25.33%) subjects of Sama Agni, 16 (21.33%) among them were having Teekshna Agni and remaining 01 (01.33%) subjects had Mandagni.

Koshta wise distribution: Majority of subjects in the control group 54 (74.66%) had Vishama Koshta, followed by 15 (20%) subjects had Krura Koshta and remaining 04(05.33%) subjects were having Mrudu Koshta.

Prakruti wise distribution: 31 (41.33%) subjects of control group were belonging to Vata Pitta Prakruti and Vata Kapha & Pitta Kapha Prakruti subjects were 22 (29.33%) each. Trial group had 29(38.66%) subjects of Pitta Kapha Prakruti, 27 (36%) subjects were of Vata pitta Prakruti and remaining 19 (25.33%) subjects were belonging to Vata Kapha Prakruti.

The two subjective questions of WHO QOL:

Table: 02 Rating the quality of life in control and study group:

	Very poor	Poor	Neither poor nor good	Good	Very good
Control Group					
Frequency Before intervention	01	03	27	37	07
Percentage	01.33	04	36	49.33	09.33
Frequency after intervention	00	04	19	43	09
Percentage	00	05.33	25.33	57.33	12
Study Group					
Frequency Before intervention	00	02	28	42	03
Percentage	00	02.66	37.33	56	04
Frequency after intervention	00	00	13	52	10
Percentage	00	00	17.33	69.33	13.33

Control Group- Among the 75 subjects, maximum of 37 (49.33%) were good with their quality of life, 27(36%) were neither poor nor good and 07 (09.33%) were with very good quality of life before intervention. After intervention 43 (57.33%) subjects were good, 19 (25.33%) were neither poor nor good with their quality of life and 09 (12%) were very good with their quality of life.

Study Group- Among the 75 subjects, maximum of 52 (69.33%) were good, were neither poor nor good, and 10 (13.33%) were very good with their QOL before intervention. After intervention, 52 (69.33%) subjects were good, 13 (17.33%) were neither poor nor good, and 10 (13.33%) were very good with their quality of life.

Table: 03 Rating the health satisfaction in control and study group:

	Very dissatisfied	Dissatisfied	Moderate	Satisfied	Very satisfied
Control Group					
Frequency Before intervention	01	05	35	24	10
Percentage	01.33	06.66	46.66	32	13.33
Frequency after intervention	00	06	29	30	10
Percentage	00	08	38.66	40	13.33
Study Group					
Frequency Before intervention	00	05	23	43	04
Percentage	00	06.66	30.66	57.33	05.33
Frequency after intervention	00	03	15	46	11
Percentage	00	04	20	61.33	14.66

Control Group: Among the 75 subjects maximum of 35 (46.66%) were moderately satisfied with their health satisfaction before intervention. After intervention 29 (38.66%) subjects were moderately satisfied with their health satisfaction.

Study Group: Among the 75 subjects maximum of 43 (57.33%) were moderately satisfied with their health satisfaction before intervention. After intervention 46 (61.33%) subjects were moderately satisfied with their health satisfaction.

Table: 04 Total WHO QOL health status:

N=75	Physical health (Domian-1)	Psychological health (Domian-2)	Social Relations (Domian-3)	Environment factors (Domian-4)	Over all
Control Group					
Before intervention	67.74	65.48	67.78	61.37	65.59
After Intervention	69.30	66.04	68.78	63.88	67.00
Trial Group					
Before intervention	71.42	69.77	71.36	69.89	70.61
After Intervention	76.53	74.2	72.01	74.36	74.27

Group-01 (Control Group): Among 75 subjects, Physical health status (Domain-01) was 67.74% before intervention, 69.30 % after intervention. Psychological health status (Domain-02) was 65.48% before intervention, 66.04 % after intervention. Social Relations status (Domain-03) was 67.78% before intervention, 68.78 % after intervention and Environmental factor (Domain-04) status was 65.59% before intervention and 67% after intervention. Overall quality of life of control group was 65.59% before intervention, 67% after intervention.

Group-02 (study Group): Among the 75 subjects, Physical health status (Domain-01) was 71.42% before intervention, 76.53 % after intervention; Psychological health status (Domain-02) was 69.77% before intervention, 74.20 % after intervention. Social Relations status (Domain-03) was 71.36% before intervention, 72.301% after intervention. Environment factors status (Domain-04) was 69.89% before intervention, 74.36 % after intervention. Overall quality of life was 70,61% before intervention, 74.27% after intervention.

DISCUSSION

Rutu Haritaki has been recommended as Rasayana to prevent manifestation of Dosha Prakopa janya Vikaras and also to promote health in Ayurveda Classics. Recent study conducted on effectiveness of Rutu Haritaki (Haritaki and Guda) was found to have Rasayana effect [5]. Hence in the current study, the

effectiveness of Rutu Haritaki in Vasanta Rutu was tested. Haritaki is considered as Vayasthapana Dravya[6] due to its Antioxidant activity, Cytoprotective and antiaging activities. Hence its efficacy on the four domains of Quality of life (QOL)[7] was tested. Due to restrictions of COVID Pandemic, the subjects selected for the study were almost within the campus of the hospital. As most of them were postgraduate students, the age group of 21-30 years was the majority in both the groups and literary status was 100% and majority of their locality was urban region and socioeconomic status was majorly upper middle class.

CONCLUSION

Rutu Haritaki (Haritaki with madhu) in Vasanta Rutu in the current clinical study was found to improve the health status of the subjects pertaining to physical, psychological and environmental domains significantly in comparison with the control group. Hence it can be concluded that Rutu Haritaki can be a choice to improve the QOL (quality of life) of the healthy individuals in the Vasanta Rutu and to prevent the seasonal disorders due to Kapha Prakopa. Adding on to this, therapeutic benefits of Haritaki and Madhu[8,9,10] can be availed by the user in Vasanta Rutu.

REFERENCES

1. <https://www.who.int/healthinfo/survey/whoqol-qualityoflife/en/index1.html>. Accessed On 15 December 2021.
2. Bhava Prakasha Nighantu: Edited by Sri Brahma Shankara Mishra , edition:2013, Varanasi: Chaukhambha Sanskrit Bhavan, Purvardha, Haritakyadi Varga, PP-04,05.
3. Vaidyaka Shabdha Sindhu : Edited by Vaidya Kaviraja Umeshchandra Gupta, Edition: 2010, Varanasi Chaukhambha Orientalia, PP-1186.
4. Bhava Prakasha Nighantu: edited by Sri Brahma Shankara Mishra , edition:2013, Varanasi: Chaukhambha Sanskrit Bhavan, Purvardha, Madhu Varga, PP-788.
5. Bargale Sushant Sukumar et al: A Clinical Study On Effectiveness Of Ashwagandha (Withania Somnifera) On Quality Of Life (Whoqol-Bref) In Apparently Healthy Subjects. International Ayurvedic Medical Journal. December 2020. <https://doi.org/10.46607/iamj.1008122020>.
6. Yagyik Mishra, Vijay.B.Neagalur, Yogeesh Acharya, Sandesh Kumar, B.R.Doddamani. A Clinical Study on Efficacy of Ritu Haritaki w.s.r. to Grishma Ritu as a Rasayana in healthy individuals. Anveshana Ayurveda Medical Journal (AAMJ) :Vol. 3 / Issue 4 / July – August 2017 :1419 – 1425.
7. Pansare T. A., Sole A. P. The Vayasthapan Karma (Age Sustaining Action) Of Haritaki (*Terminalia chebula* Retz.)- A Review. International journal of Ayurvedic and Herbal Medicine. www.interscience.org.uk, 7:2(2017) 2484–2500.
8. K Park, Parks textbook of preventive and Social Medicine, 24th edition, Banarsidas Bhanot Publishers, Jabalapur, PP-16.
9. Honey in Bronchial Asthma: From Folk Tales to Scientific Facts. Muhammad Waqas, Namra Anam. Alvina Dilshad. Honey in Bronchial Asthma: From Folk Tales to Scientific Facts. Journal of Medicine, Physiology and Biophysics, 2017, Vol.4, 06-09.
10. Mohammad Javed Ansari. Role of honey in modern medicine. Sultan, Saleh Ahmad Al-Asiri, Abdul Latief Mahesar , Role of honey in modern medicine, Saudi Journal of Biological Science, 2017 Jul; 24(5): 975–978.
11. Tharakan T, Bent J, Tavaluc R. Honey as a treatment in otorhinolaryngology: a review by subspecialty. Honey as a treatment in otorhinolaryngology: a review by subspecialty. Annals of Otolaryngology, Rhinology & Laryngology. 2019 Mar;128(3):193-207.

CITATION OF THIS ARTICLE

G Yalagachin, T.B.Tripathy, M.B.Kavita, Shivakumar. Clinical Study on Effectiveness of Rutu Haritaki (*Terminalia chebula* & Honey) on Quality of Life (WHO- QOL BREF) among Healthy Subjects in Vasanta Rutu (Spring Season). Bull. Env. Pharmacol. Life Sci., Vol 11[3] Feb 2022 : 55-59.