

How to Cite:

Geetha, K., & Elangovan, R. (2022). Efficacy of yogic practices on menstrual frequency among adolescent girls suffering with dysmenorrhea. *International Journal of Health Sciences*, 6(S3), 1152–1160. <https://doi.org/10.53730/ijhs.v6nS3.5475>

Efficacy of yogic practices on menstrual frequency among adolescent girls suffering with dysmenorrhea

K. Geetha

Ph.D Scholar, Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education and Research (Deemed to be University), No.12, Vembuliamman Koil Street, West K.K.Nagar, Chennai-78, Tamil Nadu, India
Email: geethakachapeswaran@gmail.com

R. Elangovan

Professor & Head, Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education and Research (Deemed to be University), No.12, Vembuliamman Koil Street, West K.K.Nagar, Chennai-78, Tamil Nadu, India
Email: relangovantnpesu@gmail.com

Abstract--To achieve the purpose of the random group experimental study, 120 girls suffering with dysmenorrhea were identified, 90 girls among them would be screened and finally, 30 were selected randomly by using a random group sampling method between 18 and 22 years of age. The subjects might be divided into an experimental group and control group of 15 subjects each. The Experimental Group was treated with Yogic practices for 12 weeks, Six days a week during the morning. The control group was on active rest. The pre-test and post-test were conducted before and after the training for the experimental and control group and the scores on Menstrual Frequency were measured. Analysis of covariance (ANCOVA) was used to find out the significant differences among the groups. The result of the study showed that Menstrual Frequency reduced significantly as a result of Yogic practices in the Experimental Group. Hence the hypothesis was accepted at a 0.05 level of confidence. The conclusion was that the Yogic practices helped to reduce Menstrual Frequency among adolescent girls suffering from dysmenorrhea.

Keywords---adolescent girls, yogic practices, dysmenorrhea, menstrual frequency.

Introduction

Menstruation is normal vaginal bleeding that occurs as part of a woman's monthly cycle. The menstrual blood is partly blood and partly tissue from inside the uterus. Menstrual cramps happen when a chemical called prostaglandin makes the uterus contract. Prostaglandin secretion becomes more when their Menstruation cycle is more irregular. During menstruation, the uterus contracts more strongly. If the uterus contracts too strongly, it can press against nearby blood vessels, cutting off the supply of oxygen to muscle tissue. Dysmenorrhea is the medical term for pain with menstruation or menstrual cramps. There are two types of dysmenorrhea: primary and secondary. Primary dysmenorrhea is the name for common menstrual cramps that come back over and are recurrent. Menstrual pain from secondary dysmenorrhea is a result of problems with the reproductive organs. Conditions that can cause cramping include, Endometriosis, Adenomyosis, Pelvic inflammatory disease, cervical stenosis, and Fibroids. Dysmenorrhea is painful menstruation caused due to hormonal imbalances, endometriosis, and dietary habits. It is the root cause of many physiological problems too. Dysmenorrhea is of two types Primary and Secondary. Secondary dysmenorrhea will lead to infertility. Hence the significance of the study is to create awareness among young Girls for disease-free life by observing Yogic practices regularly.

The aim of the study is to find out the effect of yogic practices on, selected physiological variables among adolescent girls suffering from dysmenorrhea. Teenagers who have dysmenorrhea are more likely to be overweight and obese to have early warning signs of diabetes and heart disease than those with regular menstrual cycles. It is hypothesized that there was a significant difference due to the yogic practices on selected physiological variables among adolescent girls suffering from dysmenorrhea than the control group. To find whether there is any significant difference in selected physiological variables due to the practice of yoga

Materials and Methods

To achieve the purpose of the random group experimental study, 120 girls suffering with dysmenorrhea were identified, 90 girls among them would be screened and finally, 30 were selected randomly by using a random group sampling method between 18 and 22 years of age. The subjects might be divided into an experimental group and a control group of 15 subjects each. The Experimental Group was treated with Yogic practices for 12 weeks, Six days a week during the morning. The control group was on active rest.

Training schedule

Training Schedules were designed to induce persistent practice and flexibility in adolescents during treatment.

Table 1
Training schedule for experimental group

Sl.No.	Name of The Training (Monday to Saturday)	Duration		
		1 to 4 Weeks	5 to 8 Weeks	9 o 12 Weeks
		40 Minutes	50 Minutes	60 Minutes
1.	Loosening Exercises	5	5	3
2	Suryanamaskar	6	10	10
3	Asanas	15	18	25
4	Pranayama	4	5	7
5	Meditation	10	12	15

Table 2
Yogic practices for experimental group

Yogic practices for experimental group for 12 weeks (60 Minutes a Day) Training Time 6 am to 7 am.								
SL.NO.	Yogic Practices	Frequency	Posture	Breadth	Repetition/ Round	Duration of each practice (in seconds)	Rest time (in seconds)	Total duration (in seconds)
1	Loosening Exercises	6 days a Week		Normal	3	50	10	180
2	Surya Namaskara		Deep	5	90	30	600	
ASANAS FOR 25 MINUTES, PRANAYAMA FOR 10 MINUTES & MEDITATION FOR 15 MINUTES								
3	Padahasthasana	6 da	Forward	Exhale	3	15	5	60
			Position	Normal 12 Breadth				
			Backward	Inhale				
4	Parivarth Trikonasana		Forward	Exhale	3	30	10	120
			Position Right side	Normal 12 Breadth				
			Twist	Exhale				
		Position left side	Normal 12 Breadth					
5	Adhomuktha Swasana	Backward	Exhale					
		Forward	Exhale					
			Position	Normal 12 Breadth				

6	Bujangasana	Backward	Inhale	3	20	20	120
		Raise up	Inhale				
		Position	Normal 12 Breadth				
		Lie down	Exhale	2	20	10	60
7	Salabasana	Raise up	Exhale				
		Position	Normal 12 Breadth				
		Lie down	Inhale	2	20	10	60
8	Pachimottanasana	Forward	Exhale				
		Position	Normal 12 Breadth				
		Backward	Inhale	2	20	10	60
9	Badhakonasana	Forward	Exhale				
		Position	Normal 16 Breadth				
		Raise up	Inhale	2	20	10	60
10	Ardha matsyendrasana	Bend & Twist	Exhale				
		Position Right side	Normal 12 Breadth				
		Relax	Inhale				
		Bend & Twist	Exhale				
		Position	Normal 8 Breadth	2	20	10	60
		Relax	Inhale				
11	Koormasana	Stretch & Forward	Exhale				
		Position	Normal 12 Breadth				
		Raise & Relax	Inhale	2	20	10	60
12	Sarvangasana	Stretch & Tighten Knees	Deep Breadth				
		Bend & Tighten	Exhale				
		Raise hip	Exhale				
		Position	Normal 12 Breadth				

			Slide Down	Exhale	3	30	20	150
13	Matyasana		Lie& Backward	Exhale	3	20	10	90
			Position	Deep 16 breath				
			Raise& Forward	Inhale				
14	Bhastrika	6 days a week	Vajrasana	25 Breadth	3	30	30	180
15	Ujjay Breadth		Sukasana	16 Breadth	5	20	10	150
16	Kapalapathi		Padmasana	20 Breadth	3	20	10	90
17	NadiShodhana		Sukasana	20 Breadth	3	30	30	180
18	Meditation		Sukasana	Normal	1	900		900
19	Shavasana			Lie down	Slow Breadth	1	600	

The test and retest were also conducted for the subject reliability, the same subjects were used, under similar conditions by the same tester. The control group was not given any training. The pre-test and post-test were conducted before and after the training for two groups and the scores on Physiological and physiological factors are measured. Analysis of covariance (ANCOVA) is to be used to find out the significant differences among the groups' Methodology followed was clearly presented in the flow chart below.

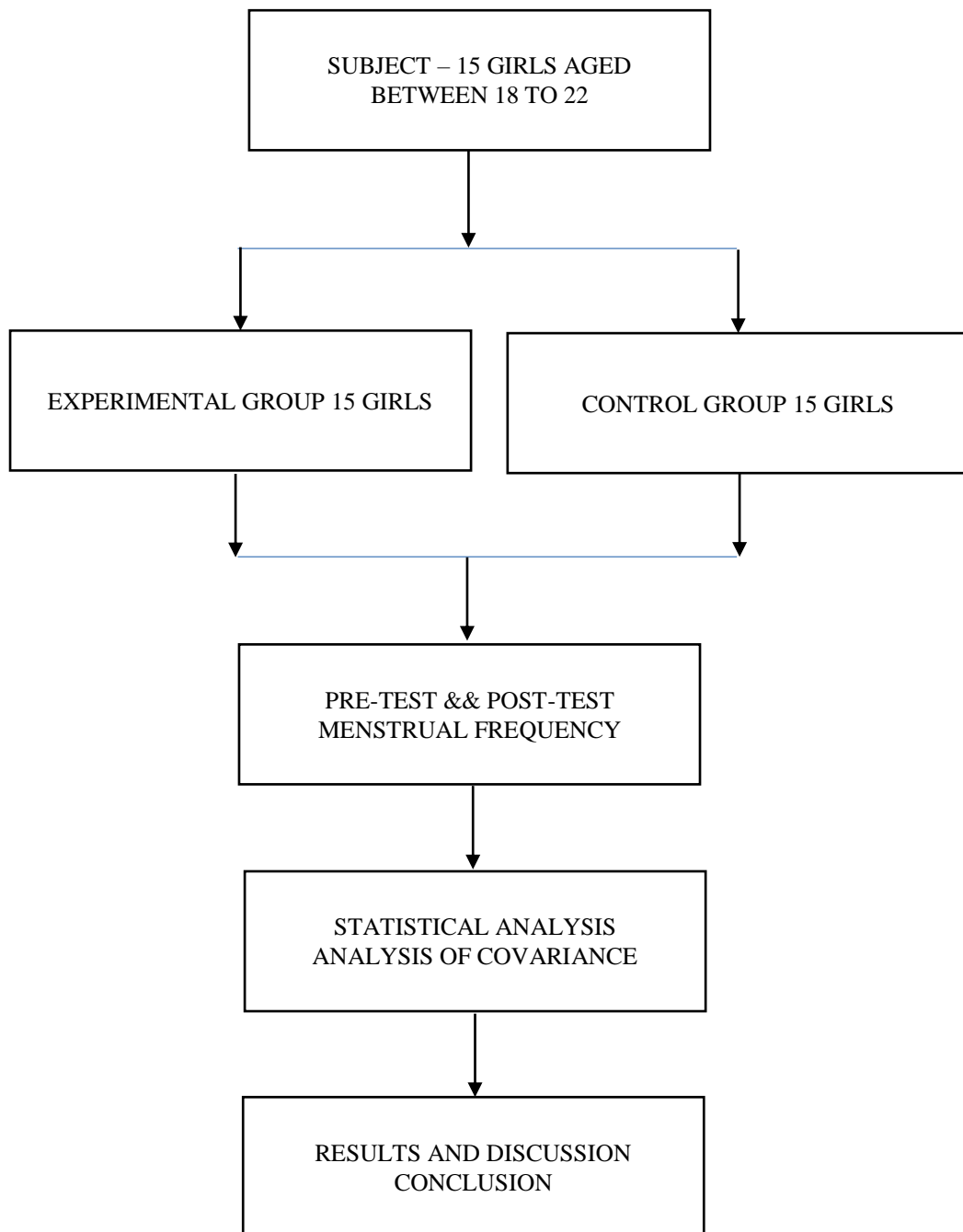


Figure 1. Flow chart showing methodology adopted for study

Results and Discussion

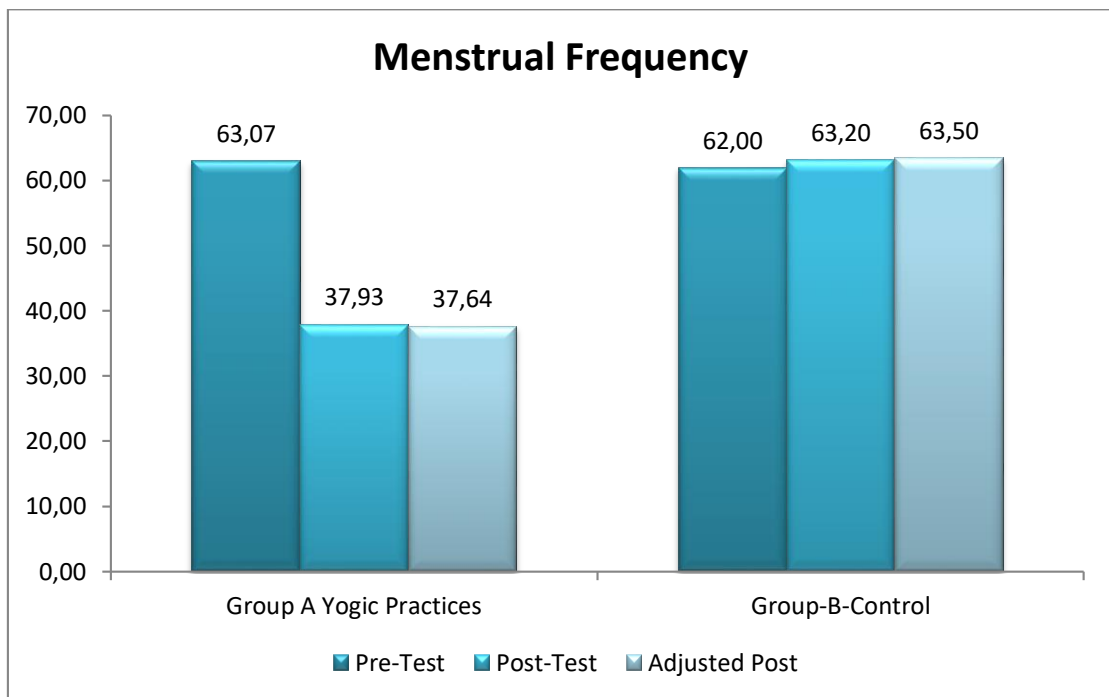
The data pertaining to the variables collected from two groups before and after the training period were statistically analyzed by using the Analysis of Co-Variance (ANCOVA) to determine the significant difference and tested at a 0.05 level of significance. The analysis of Covariance (ANCOVA) on Menstrual Frequency of Yogic Practices on and Control Group was analyzed and presented in Table III.

Table 3
Analysis of covariance of the means experimental group and the control group in menstrual frequency

Test	Experimental group	Control group	Source of variance	Sum of Squares	Degree of freedom	Mean Sum of Squares	F-Ratio
Pre-test	63.07	62	between	62.00	1.00	62.00	0.15
			within	11564.93	28.00	413.03	
Post-test	37.93	63.2	between	4788.03	1.00	4788.03	20.73
			within	6467.33	28.00	230.98	
Adjusted	37.64	63.50	between	5012.92	1.00	5012.92	47.40
			within	2855.45	27.00	105.76	
Mean gain	-25.13	1.20					

*Significant at 0.05 level of confidence. (Table F-ratio at 0.05 level of confidence for 1 and 28 (degree of freedom) =4.2, 1 and 27 (degree of freedom) =4.21)

The obtained F ratio on pre-test scores 0.15 was lesser than the required F value of 4.2 to be significant at the 0.05 level. The post-test scores analysis proved that there was a significant difference between the groups, as obtained F value of 20.73 was greater than the required F value of 4.21. This proved that the differences between the post-test means of the subjects were significant. This proved that there was a significant difference among the means due to Twelve weeks of yogic practices on variables.



*Significant at 0.05 level of confidence. (Table F-ratio at 0.05 level of confidence for 1 and 28 (degree of freedom) =4.2, 1 and 27 (degree of freedom) =4.21)

Figure 2. Bar diagram showing the mean difference among experimental group and control group on menstrual frequency

Conclusion

Menstrual Frequency is highly influenced by the Hormones like Progesterone, luteinizing hormone, Thyroid stimulation hormone, and Cortisol. When progesterone level increases, prostaglandin also increases. Thus, Yogic Practices help to balance the hormones leading to a reduction in Menstrual Frequency in adolescent girls suffering from dysmenorrhea.

Conflict of interest

There is no Conflict of Interest with reference to the above study “Effect of Yogic Practices on Selected risk factors among adolescent girls suffering with Dysmenorrhea”

Acknowledgments

I could never have reached the heights or explored the depths without the help, support, guidance, and efforts of a lot of people, though the following dissertation is an individual work, Firstly, I would like to thank my mentor and Guide Dr.R.ELANGOVAN for instilling in me the qualities of being a good scholar. I extend my special thanks to My Yoga Master Mr. Kasi with whom I forged a very special bond, for his encouragement and helpful advice. I would like to acknowledge and thank MAV School for the help to conduct my study. Thanks

also to Dr.Lakshmi, Gynecologist and Dr.Vasuden, Pathologist and Dr.Bharath, Ayurveda for their valuable suggestions for this study. I owe special thanks to the following persons throughout this birth for giving shape to my work. First, my parents molded me and invoked humanity in me, then My Husband who is my friend, philosopher, and guide. A lot of special thanks to my husband for making me Computer literate and for his encouraging support to reach what I am now. I extend my special thanks to my Brother who helped with this study. Finally, last but not least my Children for their co-operation and encouragement to complete this dissertation successfully.

1. No external source of funding is arranged.
2. Research based on questionnaire format and scores measured as per data extracted from questionnaire who participated on voluntary basis. Hence ethical clearance is not required.

References

- GEETHA S IYENGAR (2013), "YOGA a gem for women", New Delhi - 2. P42 to P47.
- LINDA CROCKETT "Healing our hormones healing our Lives", New Delhi, New Age Books. P13 to 20, 33 to 70.
- SWAMI MUKTANANDA (2009), "Nawa yogini tantra yoga for women ", Munger, India, Bihar Yoga publication trust. P9-59, P202-215.
- H.H.SRI SRI RAVISHANKAR "The Yogasara Upanishad", Bangalore, Jwalamukhi Job Press. p 19 to 64
- MUKUNDA STILES (2013) "Structural Yoga Therapy, New Delhi, Goodwill Publication House. P 195 to 304.
- H.DAVID COULTER (2010) "Anatomy Of Hatha Yoga",, New Delhi Motilal Banarsidass. P 67 to 205.
- B.K.S.YENGAR (2012) "Lights On Yoga", Uttar Pradesh, Haroer Collins Publishers. P 184 to 501.
- T.K.V. DESIKACHAR "The Heart of Yoga" (1995), Noida ,Relika Press Pvt Ltd. P 9 to 73.
- SWAMI SATHYANANDHA SARASWATHI "Asana Pranayama Mudra Bandha", Munger, India. Bihar; Yoga Publication Trust. P367 to 413
<https://mail.journalppw.com/index.php/jpsp/article/view/1785/1002>