



EFFECT OF YOGIC PRACTICES ON LOW DENSITY LIPOPROTEIN AND DEPRESSION AMONG ADOLESCENT GIRLS SUFFERING WITH DYSMENORRHEA

K.Geetha, Dr R Elangovan

Ph.D Scholar, Head of the Department and Prof

Meenakshi Academy of Higher Education and Research

ABSTRACT

To achieve the purpose of the study, 45 adolescent girls suffering with dysmenorrhea were identified from Chennai city, and 30 among them selected randomly by using random sampling method between 14 years to 20 years of age. The subjects were divided into experimental group, and control group of 15 subjects each. Experimental Group were imparted training for 8 weeks, Five days a week for a maximum of one hour in the morning. The control group were in active rest. The pre-test and post-test conducted before and after the training for experimental and control group and the scores on Low Density Lipoprotein and Depression were measured. Analysis of co-variance (ANCOVA) used to find out the significant differences among the groups. The result of the study showed that Low Density Lipoprotein significantly, Depression was reduced as result of Yogic practices in Experimental Group. Hence the hypothesis was accepted at 0.05 level of confidence. The conclusion was that the Yogic practices helped to reduce Low Density Lipoprotein and reduce Depression among adolescent girls suffering with dysmenorrhea.

KEY WORDS: Yoga, dysmenorrhea, on Low Density Lipoprotein and Depression.

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. 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.

OBJECTIVES OF THE STUDY

- To find whether there is any significant difference on selected Biochemical variables due to the practice of yoga.
- To find whether there is any significant difference on selected psychological variables due to the practice of yoga

STATEMENT OF THE PROBLEM

The purpose of study was to find out effect of yogic practices on selected Biochemical, and psychological variables among adolescent girls suffering with dysmenorrhea.

SIGNIFICANCE OF THE STUDY

Dysmenorrhea is a painful menstruation caused due to hormonal imbalances, endometriosis and dietary habits. It is the root cause of many psychological problems too. Dysmenorrhea is of two types as Primary and Secondary. Secondary dysmenorrhea will lead to infertility. Hence the significance of the study was to create awareness among young Girls for disease free life by observing Yogic practices regularly.

HYPOTHESIS

It is hypothesized that there was a significant difference due to the practices of yoga on selected Biochemical, and psychological Variables among adolescent girls suffering with dysmenorrhea than the control group.

REVIEW OF RELATED LITERATURE

Anatol J Cardiol. 2020 Mar;23(4):228-232. The use of the radial approach in coronary angiography or percutaneous coronary intervention has increased owing to its advantages over the femoral approach such as rapid patient mobilization and reduced patient comfort. However, radial artery spasm (RAS) that occurs during the procedure is a crucial factor in transradial approach failure and access site switch. Asymmetric dimethylarginine (ADMA) is a naturally occurring, modified amino acid that inhibits nitric oxide (NO) production. High ADMA levels may reduce arterial elasticity especially in small arteries like the radial artery. This study aimed to evaluate the relationship between ADMA levels and RAS in radial artery access. **Methods:** This study included 155 patients (89 males and 66 females) who underwent transradial coronary angiography between January 2016 and June 2016. The ADMA level in the plasma was determined using a quantitative sandwich enzyme immunoassay technique. **Results:** RAS was observed in 16 of the 155 patients (10.1%). The RAS was found to be more frequent in female patients (17.9% for women vs. 4.4% for men, $p=0.019$). The plasma concentration of ADMA in the RAS group was significantly higher than that in the control group [22.1 ng/mL (12.1–37.8) vs. 9.2 ng/mL (5.9–14.8), $p<0.001$]. Moreover, the plasma concentration of ADMA was significantly higher in patients with RAS among female patients [20.4 ng/mL (12.1–44.9) vs. 9.9 ng/mL (6.2–16.6); $p=0.002$] and among male patients [25.2 ng/mL (13.7–35.4) vs. 8.2 ng/mL (5.9–12.8); $p=0.007$]. Binary logistic regression analysis of all patients showed that ADMA concentration was the only predictor for RAS (odds ratio=1.142; 95% confidence interval=1.061–1.228; $p<0.001$). **Conclusion:** It was found that the ADMA concentration of the patients in the RAS group was elevated compared to that of controls. The findings indicated that elevated ADMA concentrations could predict RAS that may occur.

Amir H. Pakpour,*1(2020 Mar 26) Dysmenorrhea is one of the most common menstrual disorders and is influenced by various factors. Psychological disorders including Depression, depression, and stress have been suggested as influencing dysmenorrhea, but previous findings are inconsistent. This study will investigate the relationship between depression/Depression/stress and dysmenorrhea using a systematic review and meta-analysis. **Methods:** Online databases including PsycINFO, Scopus, PubMed, Science Direct, ProQuest, ISI Web of Knowledge, and Embase will be searched. Appropriate keywords and MeSH terms will be used to retrieve the journal papers published from 1990 until the end of December 2019. To reduced search coverage, the reference lists of all included studies will be reviewed to find eligible papers. Inclusion criteria include the following: descriptive, cohort, case-control, and cross-sectional studies; the relationship between depression/Depression/stress and dysmenorrhea being an objective of the study; and published in peer-reviewed journals. The paper selection, data extraction, and quality assessment of selected studies will be performed independently by two researchers, and disagreements will be resolved through discussions. The Newcastle-Ottawa Quality Assessment Scale will be used to assess the quality of selected studies. A quantitative synthesis will be performed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) via the STATA software, if retrieving enough number of studies with no severe methodological heterogeneities. Otherwise, qualitative synthesis will be used to report the findings. **Discussion:** To the best of our knowledge, this will be the first systematic review on this topic. Performing an inclusive search in major databases over a wide timescale is one key strength of the proposed study and will maximize the coverage of the original research studies on this topic. Results of present study are expected to lead to deeper understanding the relationship between common mental health conditions and dysmenorrhea.

METHODOLOGY

To achieve the purpose of the study, 45 adolescent girls suffering with dysmenorrhea were identified from Chennai city, and 30 among them would be selected randomly by using random sampling method between 14 years to 20 years of age. The subjects were divided into experimental group control group of 15 subjects each. Experimental Group imparted training for 8 weeks, Five days a week for a maximum of one hour in the morning. The control group in active rest. The pre-test and post-test would be conducted before and after the training for two groups and the scores on Biochemical, and psychological factors are measured. Analysis of co-variance (ANCOVA) used to find out the significant differences among the groups. Following Yogic practices given for Experimental Group:- Sukshma Vyayama, Suryanamakar, Tadasana Urdhva Hastasana , Utthita Trikonasana , Utthita Parsvakonasana , Prasaritha Padottanasana , Adhomukha Svanasana ,Baddhakonasa , Upavistha Konasana, Supta Baddhakonasa , Virasana, Supta Virasana, Supta Padangusthasana, Sashangasana, Janu Sirsasana , Paschimottanasana, Setubandha Sarvangasana ,Sarvangasana, Halasana, Viparita Karani, Savasana,Bhastrika,Ujjay pranayama, Bramhari, Nadi Shudhi, and Sahaj Meditation.

RESULTS AND DISCUSSION

The data pertaining to the variables collected from two groups before and after the training period were statistically analysed by using Analysis of Co-Variance (ANCOVA) to determine the significant difference and tested at 0.05 level of significance.

RESULTS ON LOW DENSITY LIPOPROTEIN

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

TABLE I

ANALYSIS OF CO VARIANCE OF THE MEANS EXPERIMENTAL GROUP AND THE CONTROL GROUP IN LOW DENSITY LIPOPROTEIN

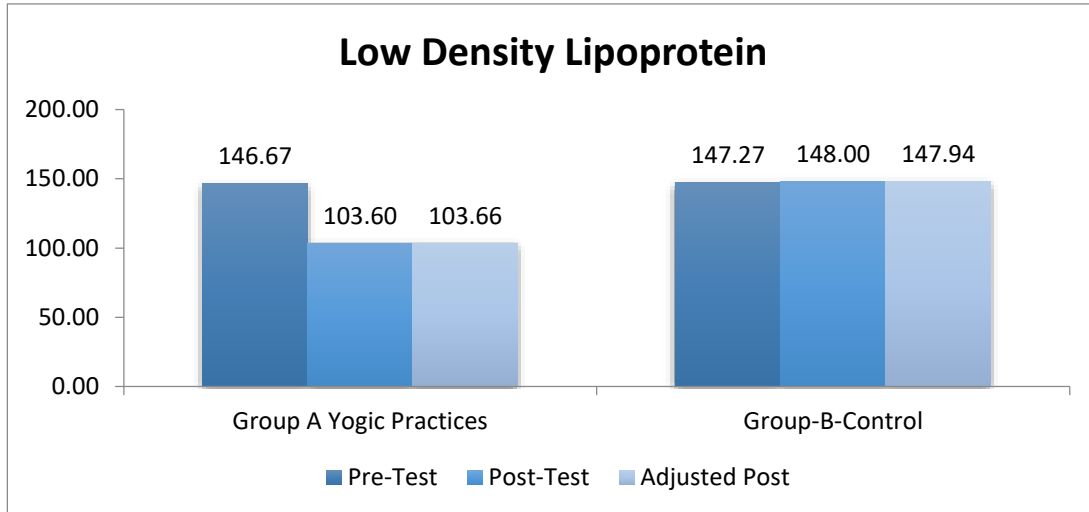
TEST	Experimental Group	Control Group	Source of Variance	Degree of Freedom	Sum of Squares	Mean Sum	F Ratio
Pre	146.67	147.26	Between	1	147.27	147.27	1.40
			With in	28	2952.27	105.44	
Post	103.6	148	Between	1	14785.20	14785.20	137.46
			With in	28	3011.60	107.56	
Adjusted Post	97.76	147.93	Between	1	14686.35	14686.35	137.86
			With in	27	2876.31	106.53	
Mean Gain	-43.07	0.73					

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

The obtained F ratio on pre test scores 1.40 was more than the required F value of 4.2 to be significant at 0.05 level. The post test scores analysis proved that there was significant difference between the groups, as obtained F value 137.46 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 significant difference among the means due to eight weeks of yogic practices on variables 'The pre-test, post-test and adjusted post-test mean values of yogic practices and the control group on Low Density Lipoprotein were graphically presented in Figure I

FIGURE I

Bar diagram showing the mean difference among experimental group and control group on Low Density Lipoprotein



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

RESULTS ON DEPRESSION

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

TABLE II

ANALYSIS OF CO VARIANCE OF THE MEANS EXPERIMENTAL GROUP AND THE CONTROL GROUP IN DEPRESSION.

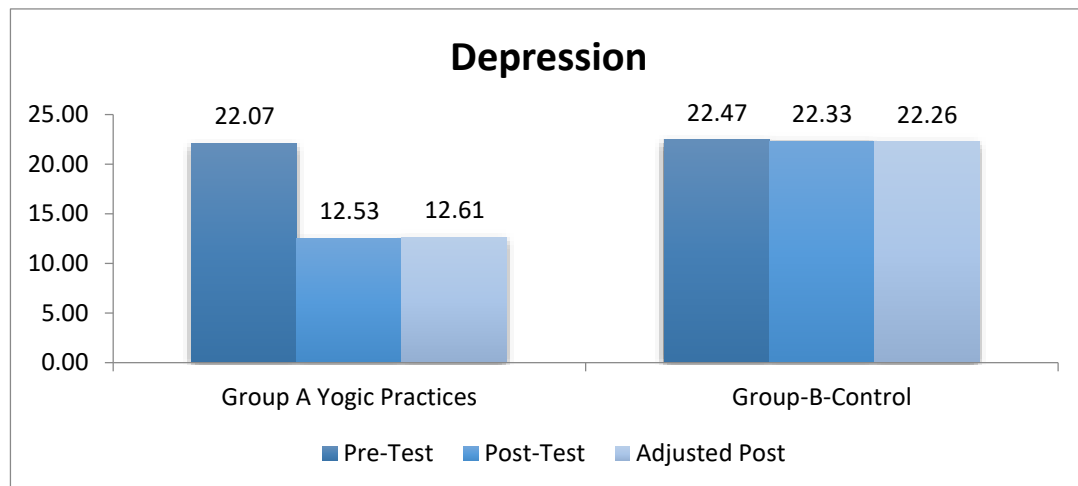
Test	Experimental Group	Control group	Source of variance	Sum of Squares	Degree of freedom	Mean Sum of Squares	F-Ratio
Pre test	22.07	22.47	between	22.47	1	22.47	7.26
			within	86.67	28	3.10	
Post test	12.53	22.33	between	720.30	1	720.30	161.26
			within	125.07	28	4.47	
Adjusted	12.61	22.26	between	688.46	1	688.46	165.38
			within	112.40	27	4.16	
Mean Gain	-9.53	0.13					

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

The obtained F ratio on pre test scores 7.26 was less than the required F value of 4.2 to be significant at 0.05 level. The post test scores analysis proved that there was significant difference between the groups, as obtained F value 161.26 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 significant difference among the means due to eight weeks of yogic practices. The pre-test, post-test and adjusted post-test mean values of yogic practices and the control group on Depression, were graphically presented in Figure II

FIGURE II

Bar diagram showing the mean difference among experimental group and control group on Depression.



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

DISCUSSION ON HYPOTHESIS

It was hypothesized that there were significant differences on selected variables such as Low-Density Lipoprotein and Depression. due to yogic practices among adolescent girls suffering with dysmenorrhea than the control group. The results proved that there was significant difference in Low Density Lipoprotein and Depression. (Reduced) due to yogic practices than the control group among girls suffering with dysmenorrhea. The hypothesis was accepted at 0.05 level of confidence.

CONCLUSION

It was concluded that yogic practices reduced Low Density Lipoprotein level and Depression. among suffering with dysmenorrhea. Hence, yogic practices are beneficial to Adolescent girls suffering with dysmenorrhea.

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