

EFFECT OF SURYA NAMASKAR AND PRAGYA YOG ON PSYCHOLOGICAL VARIABLES**Ayushi sharma***Ph.D. Scholar , Monad University Kastala Kasmabad, Uttar Pradesh.
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nitesh232326@cuh.ac.in***Abstract**

Background: The present study aims to investigate and compare the effects of Surya Namaskar and Pragma Yoga practices on psychological variables (Stress, Anxiety and Depression) of students from the Lakshmbai National Institute of Physical Education (LNPE).

Materials and Methods: Sixty (60) college students selected randomly from L.N.I.P.E. located at Gwalior, M.P. The subjects' age range is from 18-28 years, Three groups were formed out of the chosen topics i.e., Two experimental groups (n=20) and one control group (n=20). Experimental group I underwent Surya Namaskar and Group II underwent Pragma Yoga and Group III served as control group (CG). The experimental groups underwent the period of 6 weeks for 5 sessions per week training.

Results: The study's findings reported both group 1 and group 2 have significant difference after 6 weeks of yoga practices ($p > 0.05$) while no significant changes were found in control group. It has been determined that frequent yoga practice helps LNPE college students feel less stressed, anxious, and depressed.

Introduction

India has a long history of practicing yoga. Medical professionals are giving great attention to yoga, the age-old discipline of poses, breathing, and meditation. (Bhutkar et al., n.d.-a) The order of yoga poses is designed so that each pose complements the next one. When performing Suryanamaskar, the muscles throughout the body are stretched and put under pressure alternately, which is why it is believed to offer numerous benefits in a shorter amount of time. (Bhutkar et al., n.d.-b) Several ancient Indian yogic texts written in Sanskrit describe The Pranayamas are breathing exercises used in yoga that emphasize the breath. (Chetry et al., 2024) The World Health Organization defines complementary and alternative medicine (CAM) as a broad category of medical practices that are neither incorporated into the mainstream healthcare system nor a part of the country's medical legacy. (Jayawardena et al., 2020) Since life on Earth would not exist without the sun, all living things begin their days at sunrise. Indeed, the Sun is revered as a god in many cultures. It goes by the names of Mithras in Persian, Apollo in Greek, Osiris in Egyptian, Surya in Indian vedic tradition, and so forth. (Prasanna Venkatesh & Vandhana, 2022) Sun salutations are reported to have been

initially introduced by the King of Aundh. He declared that during his rule in the Indian state of Maharashtra, this order had to be adhered to consistently and without fail. Whether this tale is genuine or not, there is where this custom first started, and Surya Namaskar is the most often used way to start the day with exercise. These days, a lot of Indian schools teach and practice yoga to all of their pupils. They begin each day with the lovely and lyrical set of poses called sun salutations. (Sachan et al., n.d.2021) Aggression has emerged as the primary issue facing today's adolescents. Today's youth delinquency is rising as a result of aggression. It has been discovered that juvenile offenders exhibit a very high degree of aggressiveness. Anxiety is a psychological issue. Adolescents exhibit an aggressive trait that is focused on aggression. To address this, a comprehensive treatment plan is therefore required. (Kumar Deshmukh, 2021) the aim of the study to see the Effect of Surya Namaskar and Pragma Yoga Practices on Selected Psychological Variables among LNPE Students”.

Objectives Of The Study

1. To describe among Surya Namaskar, Pragma, and the Control group of college students the psychological factors (Stress, Anxiety and Depression).
2. To compare adjusted mean scores of psychological variables (Stress, Anxiety and Depression) of Surya Namaskar, Pragma and the Control group by considering their pre-Stress, Anxiety and Depression level as covariate.
3. To compare pretest and posttest mean scores of psychological variables (Stress, Anxiety and Depression) of Surya Namaskar Group.
4. To compare pretest and post-test mean scores of psychological variables (Stress, Anxiety and Depression) of Pragma Group.
5. To compare pretest and posttest mean scores of psychological variables (Stress, Anxiety and Depression) of the Control group

Methodology

To find out The effect of Surya Namaskar and Pragma Yoga practices on selected psychological variables 60 female students randomly selected from L.N.I.P.E college located at Gwalior, M.P. The age of the subjects limited to ranged from 18-28 years Three groups of the chosen subjects were formed. Two groups(n=40) and one control group(n=20). Group I was Experimental group underwent Surya Namaskar and Group II underwent Pragma Yoga and Group III taken as control group (CG). For six weeks, the experimental groups received training five times a

week. Every chosen subject was made aware about the study and their consent was obtained to cooperate end of the experiment and testing period. the following independent and dependent variables were selected and are presented below.

Independent Variables

1. Surya Namaskar Group.
2. Pragma Yoga

Dependent Variables

- 1 Anxiety
- 2 Stress
- 3 Depression

The Anxiety, Stress, and Depression level in the subjects are measured with one-way anova method using ADSS (Anxiety Depression Stress Scale) scale (questionnaire) given by Pallavi Bhatnagar

Training Schedule

In addition to their usual college activities, the experimental groups participated in their different training programs five days a week for six weeks during the training period. Group I experienced Surya Namaskar, Group II practiced Pragma Yoga for six weeks, and Group III was the control group. The training plan specifies the specifics. The table below outlines the training regimens for each of the two experimental groups. Daily workouts lasted over half an hour, with increasing intensity over the course of many periods. Nonetheless, they participated in typical school-related activities.

Progressive Chart of Training Schedule

S No.	Practice	Week1: time	Week2 : time	Week3 : time	Week4: Time	Week5: time	Week6: time
1	Opening Prayer	2 min	2 min	2 min	2 min	2 min	2 min
2	Pavanmuktasan series 1	06min	06min	06min	06min	06min	06min
3	Surya Namaskar (Group I)	10min	13min	15min	15min	18min	18min
4	Pragma Yoga (Group II)	10min	13min	15min	15min	18min	18min
5	Relaxation	5min	5min	5min	5min	5min	5min
6	Closing Prayer	2min	2min	2min	2min	2min	2min
7	Total time	25min	25min	30min	30min	33min	33min

Analysis Of Data And Results Of The Study

The statistical analysis of data was done in accordance with the objectives of the present study. To evaluate the effect of six weeks of training designed for Surya Namaskar, Pragma Yog and Control Group on Anxiety, stress and depression of female students of LNIPE Gwalior, ANCOVA was employed and for significant F-value the post-hoc test was calculated. For testing the difference between means of different group the level of significance was set at .05.

Findings And Results Of The Study

The effect of the Surya Namaskar and Pragma Yog on Anxiety, stress and depression by considering their Pre- Anxiety, Pre-stress and Pre- depression co-variables respectively. Surya Namaskar, Pragma Yog and Control Group were the three levels of treatment. The criterion variables were Anxiety, stress and depression. Thus, ANCOVA was used to evaluate the data, but before the researcher runs the ANCOVA, we must do a number of preliminary tests to make sure we haven't broken any assumptions.

Table-1: Descriptive Statistics of Anxiety of LNIPE Female Students

Groups	Pre-Test		Post Test		Adjusted
	Mean	SD	Mean	SD	Mean
Surya Namaskar Group	4.10	3.63	4.40	4.32	2.918
Pragma Yog Group	2.30	1.33	5.20	2.61	5.161
Control Group	4.00	2.21	2.90	3.21	4.421

Table -1 showed that three distinct groups—two experimental groups and one control group—had the following values: pretest mean, pretest SD, posttest mean, posttest SD, and adjusted mean. Control group mean and standard deviation were 4.00 ± 2.21 , Pragma Yog group mean and standard deviation were 2.30 ± 1.33 , and Surya Namaskar group mean and standard deviation were $4.10 \pm$

3.63 . Control group mean and standard deviation were 2.90 ± 3.21 , Pragma Yog group mean and standard deviation were 5.20 ± 2.61 , and Surya Namaskar group mean and standard deviation were 4.40 ± 4.32 . The Control group's adjusted mean was 4.421, the Pragma group's was 5.161, and the Surya Namaskar group's was 2.91.

This table has shown in fig.1

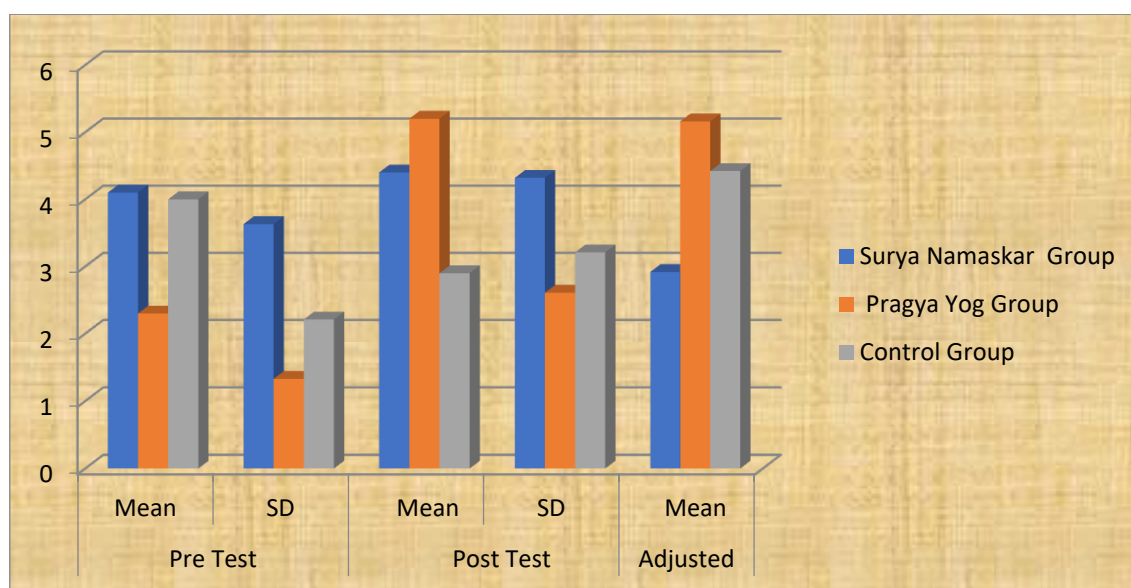


Fig1 Graphical Representation of posttest mean and SD and Adjusted posttest mean of Surya Namaskar, Pragma Yog and Control Group of Female Students

Table – 2: Summary of One Way ANCOVA of Anxiety of female students of LNIPE by taking their Pre-Anxiety as Covariates

Source of Variance	df	SSy.x	MSSy.x	Fy.x	Sig.
Treatment	2	24.73	12.369	.997	.383
Error	26	322.69	12.411		
Total	30	871.0			

From table-2 The modified F-value is.997, which is not significant, as can be shown. It shows that when students' pre-anxiety was taken into account as a covariate, there was no discernible change in the adjusted mean ratings of anxiety for Surya Namaskar, Pragma Yog, and Control Group students. Therefore, by taking into account the students' pre-anxiety as a covariate, the null

hypothesis—that there is no discernible difference in the adjusted mean scores of anxiety for Surya Namaskar, Pragma Yog, and Control Group students—is not rejected. Therefore, when pre-anxiety was considered as a covariate, it can be concluded that the levels of anxiety in the Surya Namaskar and Pragma Yog groups were equal.

Table-3: Descriptive Statistics of Stress of LNIPE Female Students

Groups	Pre-Test		Post Test		Adjusted
	Mean	SD	Mean	SD	Mean
Surya Namaskar Group	5.50	3.83	5.10	3.44	3.35
Pragma Yog Group	5.20	2.85	4.00	3.52	4.04
Control Group	5.80	2.69	3.40	2.75	5.10

Table -3 showed that three distinct groups—two experimental groups and one control group—had the following values: pretest mean, pretest SD, posttest mean, posttest SD, and adjusted mean. The control group's pretest mean and SD were 5.80 ± 2.69 , the Pragma Yog group's pretest mean and SD were 5.20 ± 2.85 , and the Surya Namaskar group's pretest mean and SD were 5.50 ± 3.83 . The

control group's posttest mean and SD were 3.40 ± 2.75 , the Pragma Yog group's posttest mean and SD were 4.00 ± 3.52 , and the Surya Namaskar group's posttest mean and SD were 5.10 ± 3.44 . The control group's adjusted mean was 5.10, the Pragma Yog group's was 4.04, and the Surya Namaskar group's was 3.35.

This table has shown in fig.2

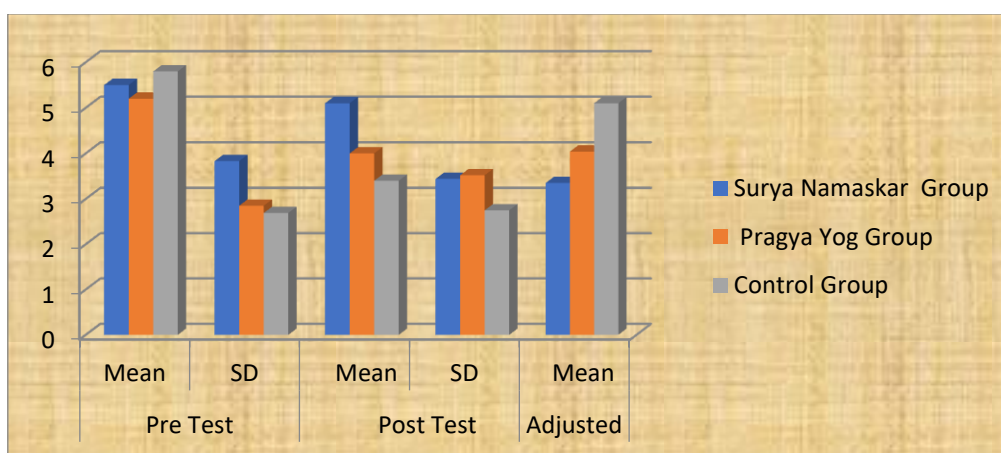


Fig2 Graphical Representation of posttest mean and SD and Adjusted posttest mean of Surya Namaskar, Pragma Yog and Control Group of Female Students

Table - 4 Summary of One Way ANCOVA of Stress of female students of LNIPE by taking their Pre-Stress as Covariates

Source of Variance	df	SSy.x	MSSy.x	Fy.x	Sig.
Treatment	2	15.39	7.69	.710	.501
Error	26	281.90	10.84		
Total	30	823.0			

From table-4, The modified F-value is .710, which is not significant, as can be shown. It shows that when students' pre-stress was taken into account as a covariate, there was no discernible change in the adjusted mean ratings of stress for Surya Namaskar, Pragma Yog, and Control Group students. Therefore, by taking into account the students' pre-stress as a covariate, the null hypothesis—that there

is no discernible difference in the adjusted mean scores of stress for Surya Namaskar, Pragma Yog, and Control Group students—is not rejected. Therefore, when pre-stress was used as a covariate, it can be claimed that the stress levels of the Surya Namaskar and Pragma Yog groups were found to be equal.

Table-5 Descriptive Statistics of Depression of LNIPE Female Students

Groups	Pre-Test		Post Test		Adjusted
	Mean	SD	Mean	SD	Mean
Surya Namaskar Group	3.0	2.63	3.70	3.26	1.87
Pragma Yog Group	1.6	1.26	3.50	3.34	3.54
Control Group	1.70	2.0	1.90	1.911	3.68

Table -5 showed that three distinct groups—two experimental groups and one control group—had the following values: pretest mean, pretest SD, posttest mean, posttest SD, and adjusted mean. The control group's pretest mean and SD were 1.70 ± 2.0 , the Pragma Yog group's were 1.6 ± 1.26 , and the Surya Namaskar group's were 3.0 ± 2.63 ; the control

group's posttest mean and SD were 1.90 ± 1.911 , the Pragma Yog group's was 3.54 ± 3.34 , and the Surya Namaskar group's was 3.70 ± 3.26 . The control group's adjusted mean was 3.68, the Pragma group's was 3.54, and the Surya Namaskar group's was 1.87.

This table has shown in fig.3

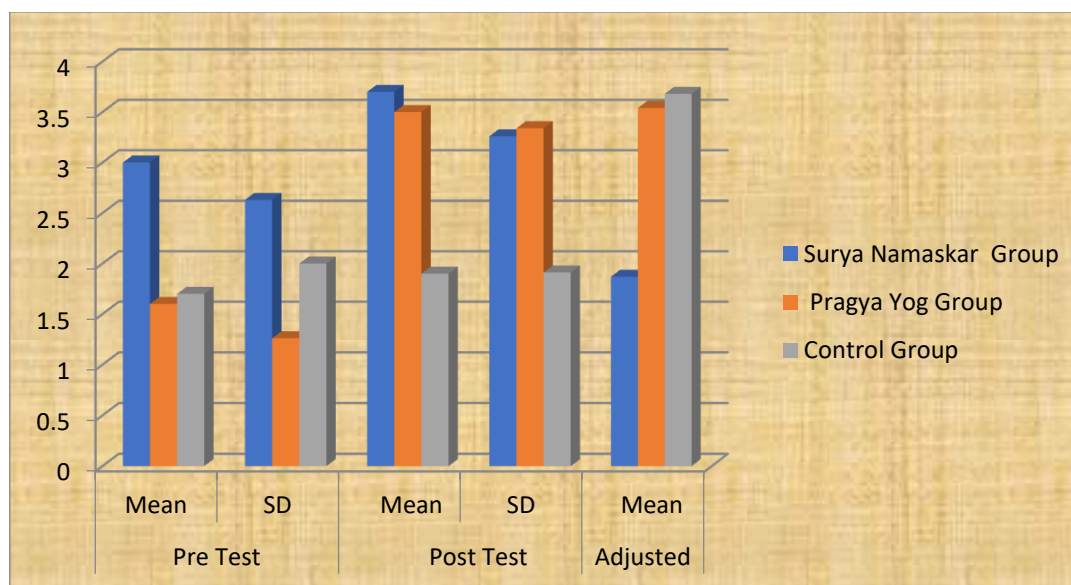


Fig3 Graphical Representation of posttest mean and SD and Adjusted posttest mean of Surya Namaskar, Pragma Yog and Control Group of Female Students

Table 6: Summary of One Way ANCOVA of Depression of female students of LNIPE by taking their Pre-Depression as Covariates

Source of Variance	df	SSy.x	MSSy.x	Fy.x	Sig.
Treatment	2	19.47	9.735	1.104	.347
Error	26	229.31	8.820		
Total	30	525.0			

From table-6, The corrected F-value is 1.104, which is not significant, as can be shown. It shows that when students' pre-depression was taken into account as a covariate, there was no discernible

change in the adjusted mean scores of depression for Surya Namaskar, Pragma Yog, and Control Group students. Therefore, by taking into account the students' pre-depression as a covariate, the null

hypothesis—that there is no discernible difference between the adjusted mean scores of depression of Surya Namaskar, Pragya Yog, and Control Group students—is not rejected. Therefore, when pre-depression was considered as a covariate, it can be concluded that the depression levels of the Surya Namaskar and Pragya Yog groups were equal.

Discussion Of Findings

Both Surya Namaskar and Pragya Yog group were found to have Anxiety to the same extent when Pre -Anxiety was taken as Covariate, this might be due to that investigated the effects of yoga asanas and Surya Namaskar on selected psychological variables among College level male students and concluded that there was significant reduction in anxiety and improvement in study skill due to yogasana and surya Namaskar compared to the control group. This study is consistent to (Mohan, 2017). Both Surya Namaskar and Pragya Yog group were found to have Stress to the same extent when Pre - Stress was taken as Covariate, this might be due to that was conducted study on Impact of Pragya Yoga on Stress Level among College Students and the result showed the significant positive effect of Pragya yoga on stress of participants. Therefore, it can be concluded that Pragma yoga significantly decreased the stress level of participants. the present study was contrary by the study conducted (Stec et al., 2023).). Both Surya Namaskar and Pragma Yog group were found to have Depression to the same extent when Pre - Depression was taken as Covariate, this might be due to that conducted the effects of Surya Namaskar and yogic practices. Through increasing scientific research in Surya Namaskar and yoga beneficial aspects are travelled in varied angle. In yoga the sun is showed by suryanadi the pranic station which carries the dynamic life-giving force. Surya Namaskar is the co-ordination of asana and pranayama. The present study was supported by the study conducted by (Godse et al., 2015).

Conclusions

- Both Surya Namaskar and Pragma Yog group were found to have Anxiety to the same extent when Pre -Anxiety was taken as Covariate.
- Both Surya Namaskar and Pragma Yog group were found to have Stress to the same extent when Pre - Stress was taken as Covariate.
- Both Surya Namaskar and Pragma Yog group were found to have Depression to the same extent when Pre - Depression was taken as Covariate.

Recommendations

- Similar studies may be undertaken with emphasis of yogic exercises and other variations of Asana in relation to Anxiety, stress and depression.
- Practice of Surya Namaskar and its effect on other variables related to players of different games may be studied.
- Effect of Pragma Yog and its variations on Anxiety, stress and depression may be studied.
- Effect of Pragma Yog, Surya Namaskar on others variables i.e. Health related physical fitness and skill related physical fitness may be studied.

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