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Effect of Surya Namaskar on flexibility among security personnel from Pondicherry University

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Abstract

Introduction: The majority of the security staff spends 6 to 8 hours a day standing while performing their duties. Therefore, there is a possibility that their body will become stiff and rigid and lose flexibility. Surya Namaskar is one of the best remedies for increase their flexibility.

Aim of the Study: To determine whether there is a discernible change between the pre- and post-test results for the flexibility of Pondicherry University security personnel.

Methodology: 40 security personnel were selected from Pondicherry University. Their age was ranged between 20 to 35 and further they were split into two teams. Twenty security men make up each group. Groups one and two were referred to as the Experimental and Control, respectively. The Training schedule was 5 days per week and 30 minutes per day either morning or evening based on their duty timing. Total twelve steps are there in Surya Namaskar each step was practiced on 3 to 5 seconds with proper technique and guidance. Flexibility was measured by sit and reach test and recorded in centimeter.

Result: To ascertain if there was a statistically significant distinction between the pre-test and post-test, a paired sample t-test was employed. The outcome demonstrates that the eight weeks of Surya Namaskar training on flexibility among security personnel from Pondicherry University caused a significant difference ($p < 0.05$). The obtained t-value for flexibility is 11.191.

Conclusion: On the basis of the study's findings, it can be concluded that Surya namaskar practise enhance the flexibility for Security Personnel from Pondicherry University.

Keywords: Surya Namaskar, flexibility, security personnel

Introduction

Yoga is a form of exercise that originated in India and has been practised throughout the world for centuries to unite the mind and body. This unity is attained by balancing the 5 fundamental universal elements present in of our body. Additionally, it helps us to keep a control on our body as well as mind. It is a great channel for increasing the overall physical and mental functioning of the human body.

There are twelve distinct bodily motions that make up Surya Namaskar. By alternating between forward and backward bending asanas, the practitioner stretches and flexes the spine and limbs to their fullest potential. All of the body's muscles and essential organs are massaged, toned, stretched, and stimulated. It facilitates the body's optimum functioning by releasing tension in every joint, massaging the internal organs, stimulating the respiratory and circulatory systems, and much more besides. The entire body-mind complex is brought into harmony. The Surya Namaskar has five main components. All of them must be followed to gain optimum results. They are Asanas, Breathing, mantra, Awareness, Relaxation.

The capacity of a joint, or a collection of joints, to move freely and painlessly is referred to as flexibility. While everyone has a very different degree of flexibility, there are baseline requirements to maintain joint and general body health. Loss of normal joint flexibility can be caused by a variety of circumstances, such as injury, inactivity, and inadequate stretching. The range of motion of the joint is dependent on the movement of the soft tissues surrounding it. Muscles, ligaments, tendons, joint capsules, and skin make up these soft tissues. If you don't stretch, especially while you're working hard, you might eventually get soft tissue shortening due to tiredness.

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Objectives of the study

To find out the significant difference between pre and post-test of flexibility on Security Personnel from Pondicherry University.

Hypotheses

H1: It was hypothesized that there may be a significant difference on Experimental group’s Flexibility due to Surya Namaskar practice among Security Personnel from Pondicherry University.

H2: It was hypothesized that there may not be a significant difference on Control group’s Flexibility due to Surya Namaskar practice among Security Personnel from Pondicherry University.

Methodology

Selection of subject

To reach the present study 40 security personnel were selected from Pondicherry University. Their age was ranged between 20 to 35 and They were separated into two groups. Each group consists of twenty security men. The first group was referred to as the Experimental group, and the second as the Control group. The purposeful sampling strategy was utilised in this investigation.

Selection of variables

Independent Variable → Surya Namaskar

Dependent Variable → Flexibility

Criterion Measure

Flexibility was measured by sit and reach test and recorded in centimeter.

Experimental Design

This study was aimed to find out the effect of eight weeks Surya Namaskar practice on flexibility among security personnel from Pondicherry University. Pre-test and Post-test were measured before and after training respectively. The Training schedule was 5 days per week and 30 minutes per day either morning or evening based on their duty timing. Total twelve steps are there in Surya Namaskar each step was practiced on 3 to 5 seconds with proper technique and guidance. Prior approval was taken from the Security heads.

Statistical Procedure

The data were analyzed by using SPSS. The level of significance was fixed at 0.05 for this study.

Results and Findings of the study

Table 1: Explains that the Descriptive and comparative statistics of pre & post test of flexibility between experimental group and control group.

Group	Test	N	Mean	Std. Deviation	Std. Error of mean
Experimental Group	Pre-test	20	31.51	3.08	0.69
	Post-test	20	35.03	3.73	0.83
Control Group	Pre-test	20	34.61	4.4	0.98
	Post-test	20	35.18	4.05	0.9

Table-1 explains that the Descriptive and comparative statistics of pre & post test of flexibility between experimental group and control group. As per the obtained result of the Experimental group’s pre & post- tests on flexibility are (Mean is 31.51 & 35.03 respectively), (Std. Deviation is 3.08

& 3.73 respectively), Std. Error Deviation is 0.69 & 0.83 respectively). The control group’s pre & post- tests on flexibility are (Mean is 34.61 & 35.18 respectively), (Std. Deviation is 4.4 & 4.05 respectively), Std. Error Deviation is 0.98 & 0.9 respectively).

Table 2: Paired samples test

Paired differences						
Group	Test	Mean	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
Experimental group	Pre & Post-test	3.51500	1.40461	0.31408	11.191	0.000
Control group	Pre & Post-test	0.56490	1.69652	0.37935	1.489	0.153

Table-2 showing the result of paired sample t-test. The result showing that the Experimental group’s pre & post-test of flexibility of Security personnel. The values are following, Mean is 3.515, S.D. is 1.404 S.E. Mean is 0.314. The obtained t-value for Experimental group is 11.191 and it is significant at 0.05 level.

The control group’s pre & post-test had mean of 0.564, S.D. of 1.696 S.E. Mean of 0.379. The obtained t-value for Control group is 1.489 and it is not significant at 0.05 level.

Discussion on hypotheses

The result of the present study and its values revealed that our hypotheses are accepted.

Conclusion Recommendation

On the basis of the study's findings, it can be concluded that Surya Namaskar practise enhance the flexibility for Security Personnel from Pondicherry University. Consequently, it is

advised to conduct research on additional physical and physiological aspects of security personnel, as well as other department employees and athletes.

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