

# A Pre-Experimental Study to Assess the Effectiveness of Pranayama to Reduce the Level of Stress among Elderly People Residing in Selected Old Age Homes in Delhi NCR

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**Abstract:** *Stress is a multidimensional phenomenon which is focused on dynamic relationship between the individual and the environment. It is both physically and psychologically challenging. There are various methods recommended to control or reduce the stress. Pranayama is a systematic therapy for managing stress and achieving a deep state of relaxation. The research design adopted for the present study is pre experimental one group pre & post-test design. After obtaining Permission the final study was conducted from 1st to 31st December 2018. Convenient sampling technique was used for selecting 30 samples. Perceived stress scale was used to assess the level of stress before & after administering Pranayama. The Pranayama is given for 30 days in the morning session. The duration of giving Pranayama is 15 minutes. In Pre-test Majority 18(60%) of elderly people had high perceived stress, 8 (26.66%) had moderate stress, and 4 (13.33%) had low stress, and in Post-test: Majority 24 (80%) of elderly people had moderate stress, 6 (20%) had low stress and 0 (0%) had high perceived stress. The results show that after taking Pranayama the elderly people shifted from high stress to moderate stress.*

**Keywords:** Pranayama, Perceived stress scale, Elderly People

## 1. Introduction

Stress is Common factor in life. Every individual experience stress in a different way. Seniors are also feel stress, even though some may have retired, raised their children & paid off their homes. Certain amount of stress is a part of life for people of all ages. For seniors, stress has the potential to be especially overwhelming. This type of tension in older adults has unique contributing factors, such as the loss of an elderly spouse or friends. Living alone can increase the sense of isolation. Sometimes the simple tasks of everyday life can cause stress in those who experience physical or medical limitations. The effects of stress can sometimes exacerbate health conditions from which some seniors suffer, causing additional worry. Stress can present itself in various ways<sup>(1)</sup>.

Ageing is a universal phenomenon, which is experienced by every human being across various cultures. The experience of ageing is unique to every individual because of the individual differences in personalities, varying social support networks and differing according to the culture to which one belongs. Also aging involves many major life changes and is a psychological step, or a transition, that alters one's relation to the world and demands new responses.

The Indian family has traditionally provided natural social security to the old people. However, in more recent times, the traditional role of the family is being shared by institutions such as old age homes. Many of the elderly parents are compelled to leave their children and stay in old age homes.

The old age homes, which were a rarity, have recently spread across the country, a fact that indicates the growing rift between the generations.

Elderly stress can be quite common as ageing presents its own set of challenges - many elderly people have to face some very difficult situations where certain health conditions could be taking a toll on the person on the one hand and, on the other, failing health or death of a spouse could contribute heavily to stress in the elderly.

Sometimes, people who have led a fairly independent life might be required to depend on another because of disabilities and coming to terms with these changes and challenges can be heart wrenching for the elderly. In such cases, it is only natural one begins to feel terribly lonely and in the absence of a support system in terms of spouse, family, and friends, elderly stress sets in during old age.

Pranayama is a yogic tool that can function beyond treatment of stress to improve a person's overall wellbeing. People practicing pranayama learn to connect their mind and body by regulating their breath, which also serves as a foundation for meditation. Learning to manage the breath through pranayama leads to relaxation and better quality of life, which can reduce or eventually eliminate the persistent symptoms of stress.

## 2. Literature Survey

**Pragya Shree, Nageshwar V and Soma Rani Das (2016)** conducted study on effectiveness of pranayama in reduction of stress among senior citizens at selected old age homes of Moradabad. Stress is a multidimensional phenomenon which is focused on dynamic relationship

between the individual and the environment. It is both physically and psychologically challenging. There are various methods recommended to control or reduce the stress. Pranayama is a systematic therapy for managing stress and achieving a deep state of relaxation. The research design adopted for the present study is quasi experimental pre & post-test design. After obtaining Permission the final study was conducted from February 15 to March 01 2016. Purposive sampling technique was used for selecting the sample from 93 senior citizens. Structured questionnaire was used to assess the level of stress before & after giving Pranayama. The Pranayama is given for 15 days in the morning session after 4 hours of breakfast. The duration of giving Pranayama is 15 minutes. The results show that after taking Pranayama the senior citizens shifted from moderate stress to mild stress.<sup>(2)</sup>

**Hema. T (2010)** The study conducted to assessed the effectiveness of selected relaxation Technique in reducing the level of stress. The results showed that 78% had moderate level of stress in pretest was reduced to 50% level of stress in post-test among senior citizens. Therefore selected relaxation techniques can also be used to improve the psychological wellbeing among senior citizens residing in old age home<sup>(3)</sup>.

### 3. Statement of Problem

“A pre-experimental study to assess the effectiveness of pranayama to reduce the level of stress among elderly people residing in selected old age homes in Delhi NCR”.

### 4. Methods / Approach

The objectives of the study were to assess the level of stress among elderly people, to assess the effectiveness of pranayama on relieving stress among elderly people, to find out the association between post-test level of stress with their selected demographic variables. Hypothesis- H<sub>1</sub>- There will be significant difference between the mean pre-test stress score and post-test stress score among elderly people after administering of pranayama at 0.05 level of significance. H<sub>2</sub>- There will be a significant association between the post-test stress Score with their selected demographic variables at 0.05 level of significance.

Quantitative research approach and Pre-experimental one group pre-test- post-test research design were adopted. The study was conducted at Guru vishram vridh ashram, Gautampuri, Delhi. 30 samples were selected using convenient sampling technique. The tool for data collection had two parts. Part 1 consisted of demographic variables, Age, Gender, Education, Marital status, Religion, Occupation before joining the old age home, How long are you living in old age, Source of income, Reasons for stay in the old age home, Supportive System. Part 2 consisted of Perceived stress scale (PPS) was used to assess the level of stress among elderly people. As a measure of reliability, the internal consistency of the Greek PSS was examined by Computing Cronbach's alpha correlation coefficient for each subscale and for the full scale. Cronbach's alpha assesses the degree of inter-item

correlation and a value larger than 0.78 is considered satisfactory.

## 5. Results and Discussion

The collected data was organized, tabulated and analyzed by using descriptive and inferential statistics including paired “t” test and Fisher Exact test. The results are discussed in following four sections.

### Section-1: Findings related to frequency and percentage distribution of demographic variables of elderly people.

In the elderly people 40% were in the age group of 60-65 years, 50% male and 50% female in the gender, 50% were having primary education, 40% were Widowed / widower, 40% were Christian, 40% were having their business, 60% were staying less than 6 months of duration, 90% were having support from family / non-government organization, 60% were abused and neglected by child, 40% were having support from family members.

### Section-2: Findings related to Pre-test and post-test level of stress among elderly people.

This section describes the Perceived stress scale scores of elderly people residing in old age homes before and after the administration of Pranayama. To determine the Perceived stress scale score descriptive and inferential statistics were used.

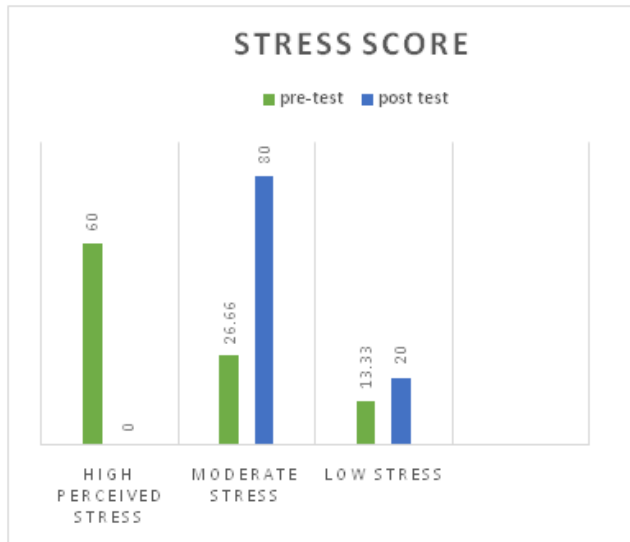
**Table 1:** The effectiveness of pranayama to relieve stress among elderly people in terms of frequency and percentage. (Pre-test & Post-test)

N=30

Level of stress	Scoring	Pre-test		Post-test	
		(f)	(%)	(f)	(%)
High perceived stress	27-40	18	60	0	0
Moderate stress	14-26	8	26.66	24	80
Low stress	0-13	4	13.34	6	20

**Pre-test:** The data presented in the table- 1 reveals that the effectiveness of pranayama to relieve stress among elderly people in selected old age homes. Majority (60%) of elderly people had high perceived stress, (26.66%) of moderate stress, and (13.34%) had low stress.

**Post-test:** The data presented in the table- 1 reveals that the effectiveness of pranayama to relieve stress among elderly people in selected old age homes. Majority (80%) of elderly people had moderate stress, and 6 (20%) had low stress.



**Figure 1:** Bar Chart Showing frequency and percentage distribution of level of stress among elderly people in pre-test and post-test

**Pallav Sengupta (2012)** conducted study on Health Impacts of Yoga and Pranayama: A State-of-the-Art Review Thousands of years ago yoga originated in India,

**Table 2:** Mean, median, mean difference standard deviation and “t” value of elderly people before and after administration of pranayama

Tests	Mean	Median	Mean difference	Sd	“t” value
Pre-test	26.16	29	7.5	8.12	2.41*
Post-test	18.66	20		4.0	

df (29) = 2.045 at 0.05 level of significance

The data represented in Table-2 indicates that the mean value of pre-test is 26.16 with standard deviation 8.12 and the mean value of post-test is 18.66 with standard deviation 4.0. The mean difference was found to be 7.5. The obtained mean difference was found to be statistically significant as evidence from “t” value 2.41 which is greater than table value (2.045) for df (29) at 0.05 level of significance. Hence the null hypothesis was rejected and research hypothesis was accepted. Thus, it was evident that pranayama was effective in reducing stress among elderly people residing in old age home.

#### Section-4: Findings related to the association of post-test score with the selected demographic variables

It was evident from the obtained Fisher exact test values that there was a significant association between the post-test stress score with selected demographic variables like Occupation before joining the old age home, reason for stay in the old age home. There was no significant association between the post-test stress score with selected demographic variables like age, Gender, Education, Marital status, Religion, How long are you living in old age, Source of income, Supportive System.

## 6. Discussion

The present study finding indicates that majority 60% of elderly people had high perceived stress, 26.66% of moderate stress, and 13.34% had low stress before

and in present day and age, an alarming awareness was observed in health and natural remedies among people by yoga and pranayama which has been proven an effective method for improving health in addition to prevention and management of diseases. With increasing scientific research in yoga, its therapeutic aspects are also being explored. Yoga is reported to reduce stress and anxiety, improves autonomic functions by triggering neurohormonal mechanisms by the suppression of sympathetic activity, and even, now-a-days, several reports suggested yoga is beneficial for physical health of cancer patients. Such global recognition of yoga also testifies to India's growing cultural influence.

#### Section-3: Findings related to effectiveness of pranayama of elderly people.

This section describes Perceived stress scale pre-test and post –test scores of elderly people before and after the administration of Pranayama. To determine the effectiveness of Pranayama on level of stress paired “t” was used.

Pranayama. After Pranayama majority 80% of elderly people had moderate stress, and 20% had low stress and nobody is having severe stress. Which is consistent with the finding of study conducted by Vivek Sharma in 2014 in Ludhiana, et al.; says that there was significant decrease in score in Group 1 and Group 2 sample after 12 weeks of intervention when compared to pre-test score<sup>(4)</sup>.

## 7. Conclusion

The present study assessed the effectiveness of Pranayama in reducing the level of stress. The results showed that 26.66% had moderate level of stress in pre-test was reduced to 80% level of stress in post-test among elderly people. Therefore Pranayama can also be used to reduce the level of stress and improve the psychological wellbeing among elderly people residing in old age home.

## 8. Future Scope

- 1) Future research study can be done on large sample for improving the generalizability of the finding to a large population.
- 2) Comparative study can be done between the elderly people residing in old age home and joint family.
- 3) A quasi or true experimental approach can be used in another large setting.

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